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ON THE

ELECTRIC UTILITY INDUSTRY

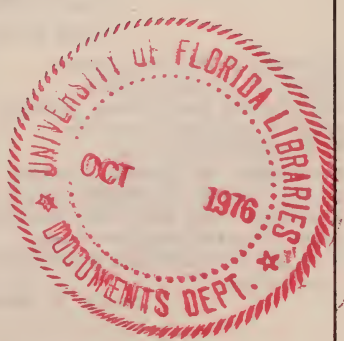
PREPARED FOR THE USE OF THE

SUBCOMMITTEE ON ENERGY AND POWER

AND THE

COMMITTEE ON INTERSTATE AND
FOREIGN COMMERCE
U.S. HOUSE OF REPRESENTATIVES

MARCH 1976



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Hon. JOHN D. DINGELL,
Chairman, Subcommittee on Energy and Power, U.S. House of Representatives, Washington, D.C.

DEAR CONGRESSMAN DINGELL: Pursuant to your request of February 1976, we are submitting selected statistical materials on the electric utility industry in the United States. We have also included a bibliography of suggested reading on utility rate regulation and restructuring. We understand that these materials are to be used by the Subcommittee members and staff as reference and background for hearings on the "Electric Utility Rate Reform and Regulatory Improvement Act."

Both the statistical materials and the bibliography were compiled and prepared by Ms. Angela Lancaster of the Economics Division, Congressional Research Service.

We trust that the materials will be helpful to your needs.

Sincerely yours,

NORMAN BECKMAN,
Acting Director.

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STATISTICAL MATERIALS ON THE ELECTRIC UTILITY INDUSTRY

INTRODUCTION

This study was prepared by the Congressional Research Service under the supervision of the staff of the Subcommittee on Energy and Power in preparation for hearings on electric utility rate reform and regulatory improvement.

The statistics on the electric industry which follow have been extracted from secondary sources and reflect the most current data available at the time of printing.

In addition to the tabular material, a glossary of basic terms has been included along with a bibliography of further sources of information on electric utilities beyond the scope of this Committee Print.

The staff of the subcommittee would particularly like to thank Ms. Angela Lancaster of the Congressional Research Service for her fine work in locating and collecting the following statistical material.

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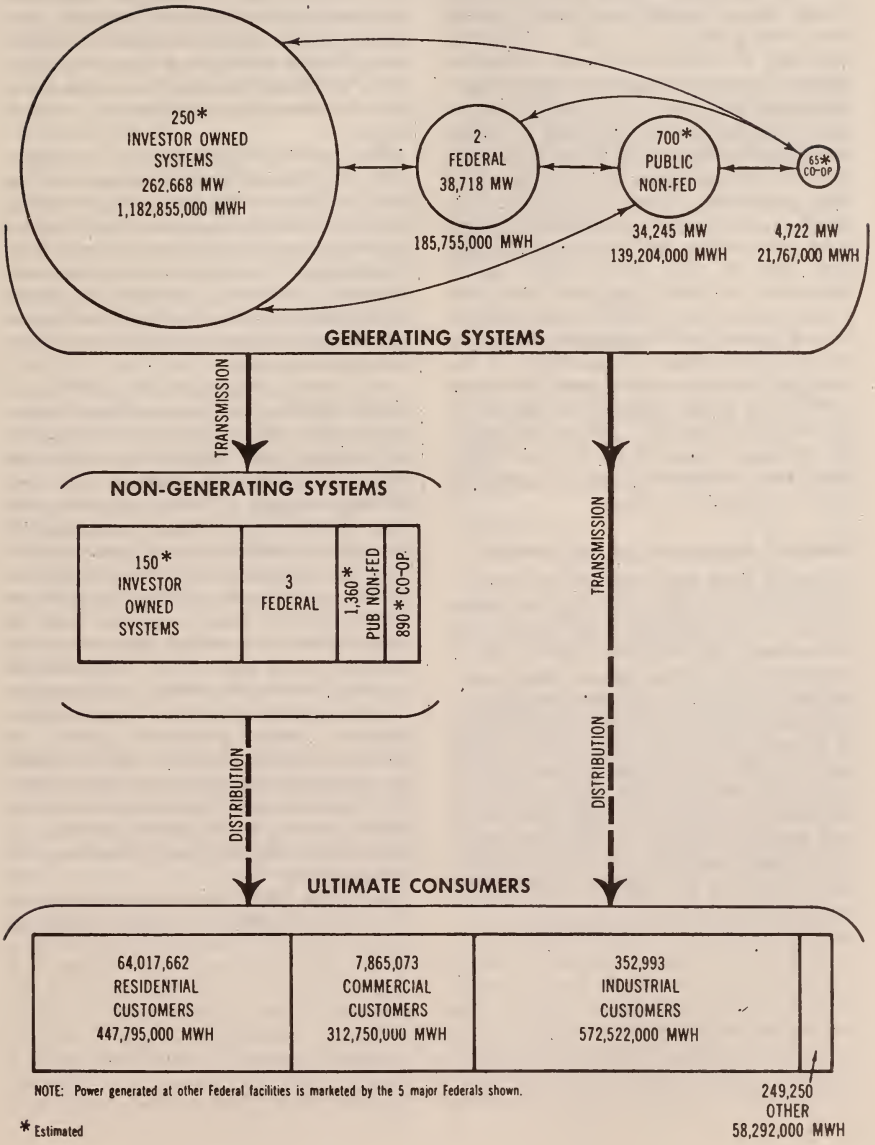
STRUCTURE OF THE ELECTRIC POWER INDUSTRY

EXCERPTS FROM THE FEDERAL POWER COMMISSION, 1970 National Power Supply

THE ELECTRIC POWER INDUSTRY
1970



NOTE: Power generated at other Federal facilities is marketed by the 5 major Federals shown.

* Estimated

STRUCTURE OF THE ELECTRIC POWER INDUSTRY

The electric power industry in the contiguous United States includes nearly 3500 systems [1] which vary greatly in size, type of ownership, and range of functions. It is made up of four distinct ownership segments—investor-owned companies, non-Federal public agencies, cooperatives, and Federal agencies—and is unique among world systems in the diversity and complexity of its organization. Most systems serving large population centers are vertically integrated, i.e., they perform the functions of generation, transmission, and distribution. In contrast, there are many systems which provide distribution exclusively, and others that generate some power while relying on firm purchases to meet part of their requirements. These are mostly smaller systems and are largely in the municipal and cooperative segments. The extent to which the smaller generating systems can remain viable will depend in part on their obtaining additional supplies of power at costs which reflect the economies of large-scale generating plants now being constructed.

Historical Background of the Industry

From its small beginnings at Edison's steam-electric station in New York City, the electric industry has experienced rapid growth and development. The American response to the continuously expanding need for electric power has been reflected in an intermingled pattern of public and private ownership of power systems. In the early 1880's, local groups generally built electric power plants to provide energy either for incandescent lighting of small interiors or arc lighting of outdoor and large interior areas, both essentially night loads. The desire to utilize available generating capacity during daylight hours often lent impetus to the development of motor loads in industrial, commercial, and transportation ventures. Conversely, some electric systems initially established to supply street railways or interurban lines, or manufacturing or mining businesses, later expanded to carry the evening load of household and street lighting.

The need to use direct current at comparatively low voltages restricted the territory that could be served by the distribution network of any given electric power plant. Coupled with a limited demand for power, this resulted in the establishment of many small local companies. Frequently, two, three, or more noninterconnected plants, operating under different patents and owned by different concerns, were established in the same city.

Introduction of the transformer in 1886 led to the use of alternating current, higher distribution voltages, and an expansion of the distribution area that could be served by an individual plant. Improvements in generators made possible larger outputs at lower unit costs, while other technical improvements made it possible to supply incandescent and arc lights as well as direct and alternating current motor loads from the same power source. The increasing economies of scale in power production and the standardization of equipment led to many consolidations of the small electric companies serving given communities or areas. The diminution of competition resulting from these consolidations of power production plants and distribution systems was one of the factors leading to government regulation of public utilities. In a number of cases the local government acquired ownership of the electric system in an effort to provide electric power at lower rates for local consumers.

During the 1920's the holding company form of business organization gained popularity

[1] There were 3445 systems as of the end of 1968.

among investor-owned companies. In part this was because it accommodated expansion of system size; in part it was because it improved the ability of operating companies whose securities lacked investment stature to meet their growing needs for new capital. Holding companies provided investors with territorial diversification and an opportunity for earnings growth which was not always available in the common stock of the small, local firm.

Absorption of operating companies by large holding company systems became more widespread during the latter part of the 1920's. Even among holding companies, there were consolidations, reorganizations, and realignments of various sorts. As a consequence, the proportion of the industry's total capacity owned by independent operating companies was markedly reduced. By 1932, systems in eight large holding company groups generated about three-fourths of the output of all privately owned systems.

The depression period had a drastic impact on the utility holding companies and their operations. Electric generation fell 20 percent between 1929 and 1933. Because utility holding companies were financed in large part by debt obligations, a drop in the earnings of the operating companies had a magnified impact upon the earnings of the holding companies. In some cases, they were unable to meet fixed interest obligations to their bondholders, and bankruptcy and reorganization proceedings became necessary.

In an effort to correct the financial and accounting abuses that had occurred in some of the holding company operations, Congress passed the Public Utility Act of 1935. Title I of the Act authorized the Securities and Exchange Commission to simplify the corporate structures of the electric and gas industries, and thus facilitate state and Federal commission regulation of these companies. The Securities and Exchange Commission was also authorized to make studies and recommendations as to the type and size of geographically and economically integrated public utility systems, and was given certain regulatory authority with respect to public utility holding company systems. Title II authorized the Federal Power Commission to regulate wholesale electric rates in interstate commerce, to regulate some aspects of corporate management, finance and accounting, and to encourage interconnection and coordination. Although expressly recognizing that Federal regulation in these matters was necessary in the public interest, Congress carefully preserved the states' rights over intrastate matters.

Ownership and Structure

While the present patterns of electric power industry ownership and structure date from the 1930's, the composition of the industry is in a perpetual state of change, reflecting the interaction of technology, market growth, and institutional relationships. The historical and current ownership patterns in terms of numbers of systems are shown in table 2.1.

TABLE 1

Number of Electric Utility Systems by Ownership Classification

Ownership	1927	1937	1947	1957	1968
Investor-Owned	2,135	1,401	858	465	405
Public					
Non-Federal	2,198	1,878	2,107	1,890	2,075
REA					
Cooperatives		192	887	1,026	960
Federal [1]	1	3	4	5	5
Total	4,334	3,474	3,856	3,386	3,445

[1] Excludes military and other installations where the electric business is not the primary function.

As shown in table 2.2, ownership patterns vary among the different areas of the country, and ownership categories tend to be grouped in certain areas. For example, about one-fourth of the investor-owned utilities in the United States are in the Northeast Region, while nearly one-third of the public non-Federal utilities and cooperatives are in the West Central Region.

The types and sizes of electric systems constituting the power industry of the United States vary from state to state and from region to region, but most states are served by several types of power suppliers. The State of Kentucky is illustrative. Most customers in the State are served by three major investor-owned utilities. There are also a number of municipal and cooperative systems, including two generating cooperatives. The Tennessee Valley Authority (TVA) sells power at wholesale to several of

these municipalities and cooperatives. In addition, a special generating firm, Electric Energy Inc., which is owned by participating investor-owned companies, provides part of the generation for the large Atomic Energy Commission load in Paducah, Kentucky from its plant located in southern Illinois.

Table 2.2 shows that about 70 percent of the utility systems in the United States are engaged in distribution only. These systems include about 93 percent of the cooperatives, about 66 percent of the non-Federal government utilities and about 38 percent of the investor-owned utilities.

TABLE 2

Number of Electric Utility Systems by Ownership Classification, Region, and Function—1968

	Investor-Owned	Public Non-Federal	Federal	REA Coops	Total
Northeast					
Distribution only	38	123		26	187
All other	64	53		4	121
Total	102	176		30	308
East Central					
Distribution only	18	171		100	289
All other	32	75		6	113
Total	50	246		106	402
Southeast					
Distribution only	15	301	0	182	498
All other	25	28	[1] 2	8	63
Total	40	329	2	190	561
South Central					
Distribution only	16	228	0	190	434
All other	32	160	[1] 1	13	206
Total	48	388	1	203	640
West Central					
Distribution only	26	386		252	664
All other	51	297	([2])	19	367
Total	77	683		271	1,031
West					
Distribution only	41	160	0	143	344
All other	47	93	2	17	159
Total	88	253	2	160	503
Contiguous U. S.					
Distribution only	154	1,369	0	893	2,416
All other	251	706	5	67	1,029
Total	405	2,075	5	960	3,445

[1] Includes Southeastern Power Administration although it does not own any generating or transmission facilities.

[2] The Bureau of Reclamation has projects in the West Central, West and South Central Regions but, in order to avoid duplication, it is shown in the West Region where most of its projects are located.

Investor-Owned Systems

The investor-owned segment of the electric power industry consists of approximately 400 systems. This is less than 12 percent of the nearly 3500 systems that comprise the total industry. In terms of any index of size, however, such as kilowatt-hours generated, kilowatts of generating capacity, or number of customers, the investor-owned systems clearly constitute the dominant segment of the industry.

The sizes of investor-owned systems range from the largest in the nation (apart from TVA) with annual sales in excess of 90 million megawatt-hours to some of the very smallest. The 200 largest systems own and operate more than 75 percent of the generating capacity and serve about 80 percent of the customers of the total electric power industry. The other slightly more than 200 systems have annual sales of less than 100,000 megawatt-hours each.

These large investor-owned systems are for the most part vertically integrated. The majority are independently owned and operated although 48 are subsidiaries of companies registered as holding companies under the Public Utility Holding Company Act of 1935, and an additional 32 are subsidiaries of companies which for various reasons are exempt from the provisions of that Act. These 80 subsidiaries are grouped into 32 holding company systems controlled by 18 companies, which are also operating electric utilities, and 14 nonoperating holding companies. The subsidiaries of the 14 nonoperating holding companies provide 22 percent of the generating capacity of the investor-owned segment of the industry. The 18 operating parent companies along with their subsidiaries provide an additional 17 percent.

The investor-owned systems generally serve prescribed areas pursuant to territorial franchises granted by state or local government agencies. These franchises are often not exclusive in the technical sense, but under most state laws a second investor-owned company cannot be franchised in a given territory without demonstrating that additional service is required by public convenience and necessity.

During recent years the electric power industry has been characterized by an increase in joint or coordinated actions and institutional arrangements. In addition to formal power pools and joint ownership arrangements, the industry has formed nine regional reliability councils and the National Electric Reliability Council as well as a number of planning organizations and coordinating groups. These are described in chapter 17.

Federal Systems

Five large Federal agencies market federally-generated power in the 48 contiguous states: the Tennessee Valley Authority, Bonneville Power Administration (BPA), Southwestern Power Administration (SWPA), Southeastern Power Administration (SEPA), and Bureau of Reclamation. They are important contributors to the electric power supply of this country. In 1968 the Federal systems had about 12 percent of total generating capacity and generated about 13 percent of the total electric energy. In these respects they are second only to the investor-owned systems.

The Federal Government's role in the electric utility field reflects a broad range of objectives. The TVA, established in 1933 to develop the resources of the Tennessee River Basin, was authorized to develop hydroelectric power resources in conjunction with navigation and flood control. Following essentially full development of the hydroelectric power potential of the basin, TVA developed a comprehensive power production system by adding fossil-fueled and nuclear generating plants.

It is now the nation's largest electric system, having approximately twice the generating capacity of the next largest, and is the only Federal agency with full responsibility to supply all the electric power requirements of a large geographical area. More than half of its power production is sold at wholesale to municipal and cooperative systems, with most of the balance going to industrial customers and Federal agencies.

Except for $65 million borrowed at long term from the Reconstruction Finance Corporation and the Treasury Department in fiscal years 1939–41, the TVA received all of its construction funds from Congressional appropriations prior to 1959. In 1959, the TVA Act was amended to permit the TVA to sell debt obligations in the open market and to require TVA to pay interest to the Federal Government on the net appropriation investment in power facilities.

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This amendment also required repayment to the United States Treasury of such investment in annual installments of not less than $10 million per year for the first five years, $15 million per year for the next five years, and $20 million for each year thereafter until a total of $1 billion has been repaid.

The TVA Act gives preference to states, counties, municipalities, and cooperatives in purchasing power for distribution, and includes a provision specifying that any contract signed with an investor-owned electric company for purchase of TVA power can be cancelled on five years' notice if the power is needed by a preference customer.

Power marketed by the four large Federal power agencies other than the TVA is hydroelectrically generated and generally supplements the electric power supplies of other systems in the areas in which they operate. The Secretary of the Interior is the marketing agent for power produced by all Federal power projects other than TVA. Except for sales to a number of large industrial customers, nearly all of the power is sold at wholesale to other electric systems.

Bonneville Power Administration is the marketing agent for power from 33 Federal hydroelectric projects of the Bureau of Reclamation and the U.S. Army Corps of Engineers in the Pacific Northwest (26 of these are operating, 5 are under construction and 2 are authorized but not yet under construction). It has designed and built the nation's largest network of long distance, high-voltage transmission lines which serves as the main grid for all interconnected utilities in the Pacific Northwest.

The Southwestern Power Administration and the Southeastern Power Administration market the power produced at Corps of Engineers hydroelectric plants in the south central and southeastern states, respectively. SWPA has constructed some transmission facilities, but SEPA relies exclusively on transmission arrangements with other systems to market its power.

The Bureau of Reclamation operates several electric power systems, which include hydroelectric power plants built in widely separated areas in the Western States and Alaska. It has constructed transmission facilities to interconnect a number of its own plants, as well as those of others, in the Missouri Basin, the Southwest, the Far West and the Colorado River Basin; these projects are generally interconnected with one another, as well as with other neighboring systems.

Several Congressional Acts require the Secretary of the Interior, like the TVA, to give preference to public bodies and cooperatives in the sale of electric power. The idea of preference initially appeared in the Reclamation Act of 1906, which provided preference "to municipal purposes." Preference was made more specific in the TVA Act of 1933 and the Bonneville Project Act of 1937 which explicitly direct that preference be given to public bodies and cooperatives in the sale of the power. The Flood Control Act of 1944 contains a similar specification with respect to power generated at Corps of Engineers' projects and marketed by the Secretary of the Interior. Since public agencies and cooperative systems are given a statutory preference to buy the output of Federal projects, the extent of Federal system development has had a significant impact on the number, and power costs, of preference customers. Such costs reflect the lower fixed charges on capital investments in Federal projects by virtue of their lower interest costs and the absence of Federal income and other taxes.

Public Non-Federal Systems

Public non-Federal electric systems generate approximately 9 percent of total industry production and sell about 13 percent of the total electric energy. These systems, which include towns and cities, a small number of counties, special utility districts, and various kinds of state authorities, purchase approximately 35 percent of their requirements from the Federal systems and an additional 11 percent of their requirements from investor-owned systems. The number of systems under public non-Federal ownership reached its peak in the mid-1920's with nearly 3100 electric systems. The number declined rapidly to about 2200 by 1927. In 1968, there were 2075 such systems, of which 1369 purchased all of their energy requirements.

Municipal utilities are by far the most common form of the public non-Federal power entity. In the early stages of the industry's development, many towns and cities constructed electric systems to provide electric power for street

lighting and other public uses. Most of them subsequently constructed distribution facilities to permit retail sales. Municipal utilities vary in size from very small systems, serving only a few hundred customers, to the Los Angeles Department of Water and Power which serves over a million customers. In a relatively few instances (e.g. Cleveland, Ohio), a municipal system and an investor-owned system serve within the same municipality. However, territorial competition between municipalities and other systems often occurs upon expansion of municipal boundaries into fringe areas previously served by cooperatives or investor-owned systems.

During the 1930's and 1940's other government entities such as Public Utility Districts were established to produce and sell electric power. Some irrigation districts have included electric power supply among their activities for many years. Also, some states have entered the power supply field via special authorities such as the Arizona Power Authority and the Power Authority of the State of New York; the State of Nebraska is served entirely by public power entities and cooperatives.

Local government power agencies are exempt from Federal income tax and generally are not subject to state income tax. They are generally exempt from other state and local taxes but many of them make payments in lieu of taxes to their own local governments and provide power free or at reduced rates for street lighting, water pumping, and other municipal uses. Many of them also make other contributions to their local governments.

Cooperative Systems

The rural electrification program was initiated by Presidential Executive Order in 1935, and in 1936 legislation was passed establishing the Rural Electrification Administration as a lending agency. The REA has financed the construction of about a thousand rural electric service cooperatives in 46 states,[2] Puerto Rico, and the Virgin Islands[3]. They range in size from less than a hundred members to as many as 35,000. Though they have a total membership representing 10 percent of all electric power customers in the country, their total sales of energy are only about 4½ percent of the national total, and their generating capacity is about 1 percent of the total. Their distribution costs per customer have been relatively high because they serve an average density of only about four customers per mile of line. On the other hand, they have generally avoided the relatively high costs associated with inner-city congestion. They purchase 77 percent of their wholesale power requirements—45 percent from the government segment (including Federal systems) and 32 percent from investor-owned utilities; the remaining 23 percent is self-generated. In 1940, about 92 percent was purchased—41 percent from the government segment and 51 percent from the investor-owned segment; about 8 percent was self-generated. A large part of the government produced power comes from Federal hydroelectric projects over Federal transmission lines, or via transmission arrangements with neighboring utilities.

The REA program promoted the formation of small distribution systems purchasing their power at wholesale from existing electric utilities in their areas. As the distribution cooperatives grew in size, some of them organized generation and transmission (G&T) cooperatives for the construction of facilities to supply their own power. REA's stated policy is to make loans for G&T facilities only (1) where no adequate and dependable source of power is available to meet the consumers' needs, or (2) where the rates offered by existing power sources would result in a higher cost of power to consumers than the cost from facilities financed by REA, and where the power cost savings that would result from the REA-financed facilities bear a significant relationship to the amount of the proposed REA loan. The G&T cooperatives have gradually become an important power source; they now generate over 20 percent of REA-borrowers' total wholesale power requirements. There are about 50 such G&T's, some having as much as several hundred megawatts of generating capacity and participating as full members in regional power pools.

Competition between cooperatives and investor-owned utilities, and between cooperatives

[2] There are no cooperatives in Massachusetts, Connecticut, Rhode Island or Hawaii.

[3] There are 32 electric service cooperatives which have repaid their loans from REA in full and are under no further obligations to that Agency. There are also about a dozen small cooperatives which were originally organized without REA loans.

and municipally-owned systems, is reflected in attempts to attract new customers into their respective service areas and to acquire new service areas. Competition has become acute in some places with the movement of industry into suburban and farm areas. In some cases, where a city is expanding its boundaries, the system serving within the city has taken the position that the newly acquired citizens are its customers. But if the new citizens are already served by a cooperative, the cooperative has been reluctant to give them up, arguing that it took the risk of initiating service at a time when no other system was willing to serve.

Competition is even more evident in the attempts of each type of utility to attract large, profitable industrial loads. In the past, some of the investor-owned suppliers restricted, through provisions in their wholesale power contracts, the resale of power by municipals and cooperatives to large-use customers. In the Georgia Power Company case [4] and the Mississippi Power Company case,[5] the Commission has ruled such provisions to be unlawful.

At the Federal level, controversy has centered on legislation dealing with the scope of the REA program and the 2 percent interest rate charged, the scope of Federal power projects which are the main source of energy purchased by cooperatives, and the tax provisions pertaining to the REA cooperatives. Although the REA cooperatives, like other consumer cooperative ventures, do not operate for profit and therefore pay no Federal income tax, they are liable in most instances for state and local property taxes. In some states they also pay gross revenue taxes, sales taxes, and other state and local taxes.

[4] 35 FPC 436, 35 FPC 818 (1966), Docket Nos. E-7099 and E-7193. The Commission's decision in this case was upheld by the Fifth Circuit Court of Appeals in 373 F.2d 484 (CA 5, 1967).

[5] Docket No. E-7112, Opinion No. 593, issued February 18, 1971.

Changes in Industry Size, Structure, and Ownership

Table 2.3 shows the relative sizes of electric systems, segregated by type of ownership, for 1962 and 1968.

Table 2.3 shows that the number of electric systems in all segments of the industry decreased between 1962 and 1968. The investor-owned segment showed the greatest change with a decline of 75 systems, or about 15 percent. Next in significance was the reduction of 49 systems, or 2.3 percent, in the public non-Federal segment. The change in the number of systems in the cooperative segment was relatively minor, and the number of Federal systems did not change. Undoubtedly, technological advances in generation and transmission, resulting in rapidly increasing sizes of new generating units and substantial in-

TABLE 3

Number of Electric Utility Systems in the Contiguous U.S. by Size and Ownership Classifications

Annual Sales (millions of MWh)	Investor-Owned	Public Non-Federal	Federal	REA Cooperatives	Total
1962					
Over 10	18	0	3	0	21
1–10	88	20	2	1	111
0.1–1	85	136	0	64	285
Under 0.1	289	1,968	0	904	3,161
Total	480	2,124	5	969	3,578
1968					
Over 10	35	2	3	0	40
1–10	100	34	2	5	141
0.1–1	61	234	0	150	445
Under 0.1	209	1,805	0	805	2,819
Total	405	2,075	5	960	3,445

creases in transmission voltages, have provided a significant impetus to these changes.

There has also been an important, although gradual, change in industry composition with respect to functions performed. In 1962, 2315 of the 3578 systems (approximately 64%) were engaged in distribution only. In 1968, 2416 systems of 3445 (or approximately 70%) were engaged in distribution only. In general, two factors have contributed to this trend. First, the decline of 75 systems in the investor-owned segment matched closely the decline in the number of investor-owned systems that had been generating their own power. Second, over 100 of the systems in the non-Federal government segment withdrew from production of electric power and became "all-requirements" purchasers of power from others. These trends can be expected to continue as the growing scale of generation and transmission facilities requires increasingly large capital investments.

The changes in the electric power industry structure described above lead directly to the question of the changes to be anticipated over the next several decades. Some have suggested that technological and economic forces are likely to cause the industry gradually to group itself into as few as 15 to 20 large integrated systems, in part because of economies of scale and improved reliability attainable when systems are planned and operated on a coordinated single system basis. Generally, those who take this position feel that it is very much in the public interest that this occur. They, therefore, tend to favor acquisition of small systems by their larger neighbors and to favor most mergers among contiguous larger systems.

Others take the view that one of the major strengths of the electric power industry lies in the diverse and pluralistic nature of its ownership. Those taking this view believe that it is desirable for the industry to continue to consist of many systems of various sizes and various types of ownership, partly because competition among systems is maintained, and partly because consumers can deal with a more localized management that may be more responsive to their needs. In addition it is argued that when systems become very large they may become more difficult to regulate, especially at the state level. Proponents of a diverse and pluralistic industry believe that most of the advantages of centrally owned and operated large systems can be obtained by means of power pools, joint ownership and other coordination arrangements among smaller, individually owned systems.

Still others feel that we can have the best of two worlds—larger, more efficient generating and transmission facilities, coordinated and controlled by a tight centralized structure, and at the same time continued local customer service through small and autonomous marketing companies, public agencies or cooperatives, or through highly individualized and decentralized divisions of a larger authority.

The extent to which the trend toward greater concentration in the electric power industry can be expected to continue will depend in large measure upon the relative weight given by the industry, the regulatory agencies, and the general public to these points of view.

Combination Electric and Gas Utilities

The 78 investor-owned utilities, Classes A and B,[6] which sell both gas and electricity play an important role in the United States energy market. In 1967, these combination companies accounted for 43 percent of total kilowatt-hour sales and 50 percent of total electric operating revenues in the investor-owned segment.

In general, the electric portion of these combination utilities is larger in terms of revenues and investment in plant than the gas portion. In 1967 the gas plant owned by combination companies was only 14.9 percent of the value of the combined electric and gas plant, although gas revenues were 25 percent of total revenues. This relationship is primarily due to the large investment in production and transmission facilities required for the electric service provided by combination companies, in contrast to the smaller investment in distribution facilities for the gas service they typically provide.

In table 2.4, combination utilities are divided into three size categories (according to sales in MWh) to distinguish their operating characteristics. Companies in the "large" category include nine out of the ten largest investor-owned electric utility operating companies in the United

[6] Class A utilities have annual electric operating revenue of $2,500,000 or more; Class B utilities have annual electric operating revenue of $1,000,000 or more.

TABLE 4

Selected Characteristics of Classes A and B Investor-Owned Combination Utilities—1968

Annual Sales (millions of MWH)	No. of Companies	% Electric Revenues of All Combination Companies	% Gas Revenues of All Combination Companies
Over 10 (large)	13	63.4	48.9
1–10 (medium)	47	34.8	44.1
Under 1 (small)	19	1.8	7.0
Total	79	100.0	100.0

States measured by total assets. These nine largest companies provide about 55 percent of the electric revenues and about 44 percent of the gas revenues of all combination companies.

There is a variance of views concerning the claimed benefits or detriments associated with combination gas-electric companies. Those favoring separation of gas and electric services maintain that the public interest is served best when gas and electric utilities actively compete for household, commercial, and industrial markets. These markets include space heating, water heating, cooking, air conditioning, refrigeration, clothes drying, and outdoor lighting, as well as steel furnaces, industrial process heating, pipeline pumping and the like. This line of analysis contends that greater competition stimulates more effective management and leads to lower prices, expanded output, improved service, greater operating efficiency, and more intensive research and promotional activities, all giving the consumer greater freedom of choice.

The advocates of combination companies contend that they have lower costs than single energy utilities. The proponents point to economies of joint operations such as meter reading, appliance inspection, service departments, sales and administrative staffs, and use of a single trench for underground distribution. In addition, they claim flexibility in solving peaking problems and greater revenue stability, and point to advantages of dealing with only one utility where a customer can obtain comparative information concerning the preferable form of energy for specific needs.

Regulation

While the electric power industry has been subject to regulation of various of its activities almost since its inception in the late 19th Century, the scope and tempo of regulatory activity has increased during the last few years. This has resulted in large part from: (1) concern for the preservation and protection of the environment, (2) concern for the reliability of electric power supply, (3) the growing importance of nuclear power in the total power supply, and (4) the rapidly rising cost of fossil fuel and capital in the context of a generally inflationary economy.

Since the early part of this century, major responsibility for the regulation of the electric industry, especially the investor-owned segment, has rested with the state utility commissions. At the present time nearly all of the states[7] have established regulatory commissions having some authority for regulation of the investor owned electric utility systems. However, less than half of the state regulatory commissions have authority to regulate publicly owned and cooperatively owned systems. The scope of the authority of state commissions to regulate electric utility systems varies considerably among the states, but many state commissions have rather broad powers including the regulation of rates, accounting, security issues, safety and adequacy of service, as well as authority for certification of major property additions, initiation and abandonment of service and allocation of territory.[8]

At the Federal level several agencies have important responsibilities for regulating specific ac-

[7] The exceptions are Minnesota, Nebraska, Texas and South Dakota. Various forms of local regulation are authorized in these states as well as in a number of other states which do have state commissions.

[8] For details see Federal Power Commission, *Federal and State Commission Jurisdiction and Regulation, Electric, Gas, and Telephone Utilities*, FPC S-184, Washington, D. C., 1967.

tivities of electric power systems. These include among others the Federal Power Commission, the Securities and Exchange Commission, and the United States Atomic Energy Commission.

The Federal Power Commission has authority to provide certain types of economic regulation of investor owned electric utilities. It is directed to encourage the most efficient and productive utilization of all of the nation's electric energy resources. Its responsibilities include the licensing of virtually all non-Federal hydroelectric projects, the regulation of interstate wholesale rates and services and the regulation of corporate activities, accounts and reports of systems subject to its jurisdiction.

The Federal Power Act makes the Commission's responsibility that of ". . . assuring an abundant supply of electric energy throughout the United States with the greatest possible economy and with regard to the proper utilization and conservation of natural resources. . . ." This National Power Survey represents one part of the Commission's total effort to carry out that responsibility. An equally important part of that effort has been the implementation by the Commission of a program for adequacy and reliability of electric power resources, Order No. 383–2, Policy Statement—Reliability and Adequacy of Electric Service, issued April 10, 1970, 43 FPC 515. This order provides for: (1) the annual reporting of data by the nine regional reliability councils bearing upon future reliability and adequacy of service in each council region including projections and bulk power supply expansion plans reaching ten years into the future, and (2) participation of state and Federal regulatory personnel in the deliberations and work of the nine councils including various committees established by participants in these councils.

The Securities and Exchange Commission regulates certain phases of the activities of public utility holding companies and their subsidiaries engaged in the electric utility business including accounting, security issuances, mergers, service company arrangements and intercompany transactions. The holding company device has been receiving considerable attention in recent years as a method of corporate realignment and consolidation in the electric utility industry. Currently there are several proposed consolidations pending before the Securities and Exchange Commission which are likely to have an important bearing upon the future ownership structure of the electric power industry.

The Atomic Energy Commission has authority to regulate construction and operation of all nuclear reactors regardless of their ownership—public, private, or cooperative. Its regulatory responsibilities and activities are discussed at some length in chapter 6. Recently, there has been increasing controversy concerning the environmental effects of the operation of nuclear power reactors. Disagreement has arisen concerning appropriate radiation levels associated with plant operation. There have also been questions concerning possible adverse thermal effects resulting from cooling requirements of the nuclear projects. A further source of controversy relates to the requirement of the Atomic Energy Act of 1954 as amended involving antitrust aspects of proposed nuclear projects.

At the Federal level, concern with environmental factors has taken tangible form in the creation of the Environmental Protection Agency [9]. Also, the increased attention has derived in part from the enactment of the National Environmental Policy Act of 1969 [10]. This legislation requires the preparation and distribution of an environmental statement in connection with any major Federal action significantly affecting the quality of the human environment, including thorough evaluation of alternative courses of action.[11] The Federal Power Commission had employed substantially equivalent procedures in regard to its hydroelectric licensing responsibilities prior to the passage of the National Environmental Policy Act. However, to effect implementation of the requirements of that Act the Commission issued

[9] The responsibilities and activities of this agency and predecessor agencies with respect to air and water quality control are described in detail in chapters 10 and 11.

[10] 42 U.S.C. 4321, *et seq.*

[11] Section 102 (2) (C) of the statute prescribes an analysis of five essential points as part of the detailed statement. They are: (i) the environmental impact of the proposed action; (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented; (iii) alternatives to the proposed action; (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity; and (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

its Order No. 415 on December 4, 1970—which was later revised in Order No. 415B issued November 19, 1971.

At the state level, increasing public concern for the quality of the environment is evident in the actions of state legislatures in recent years to strengthen the role of the state regulatory commissions and other state agencies in controlling environmental effects of electric power facilities.[12] Of the approximately 30 state commissions which require the issuance of certificates for the construction of power plant and transmission lines, at least two-thirds now give consideration to the impact of the proposed facilities on various environmental factors. In at least 9 states, utilities must obtain separate authorization from other state agencies as well as the regulatory commissions.

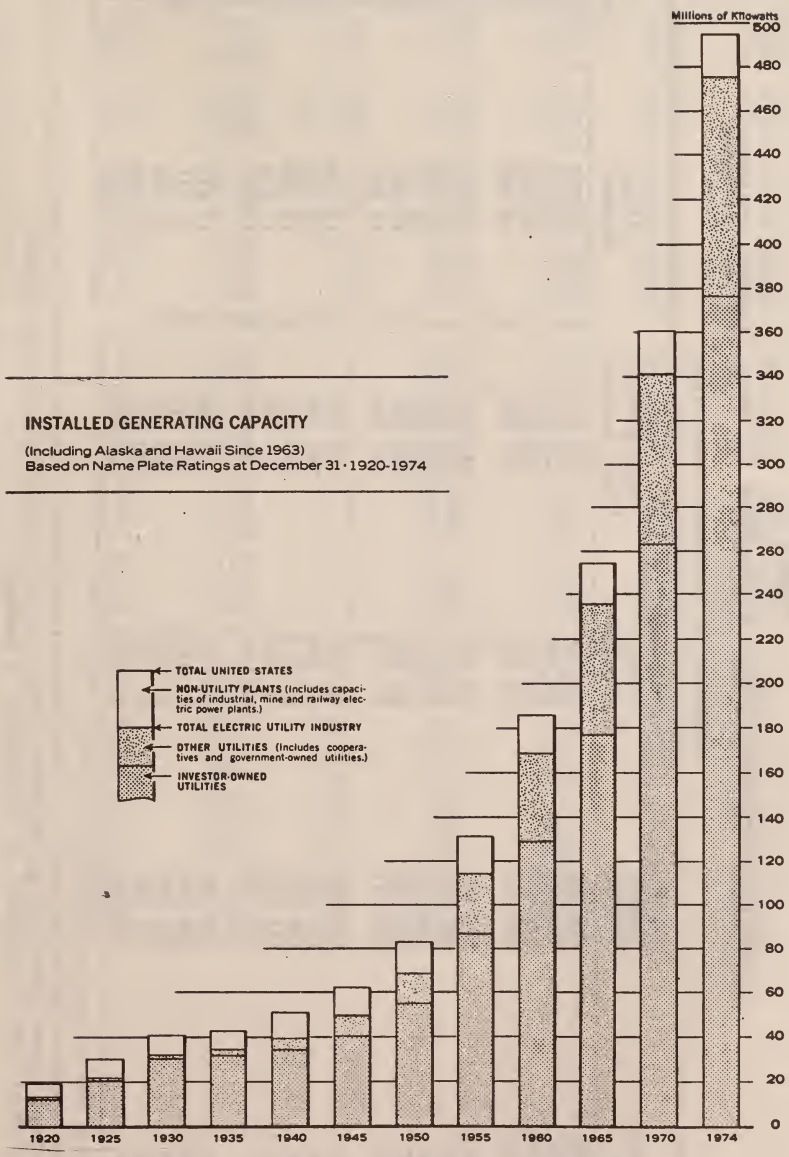
[12] A state by state summary of the authorities and activities relating to environmental controls affecting electric utilities may be found in *Electric Power and the Environment*, a report sponsored by the Energy Policy Staff, Office of Science and Technology, Washington, D. C., August 1970.

Already heavy expenditures by electric utilities for environmental pollution control facilities, higher fuel costs relating to environmental standards and higher interest costs in the context of a generally inflationary economy have resulted in an unprecedented number of applications to state and Federal regulatory agencies for rate increases. During the year ended June 30, 1971, about $1 billion of annual electric rate increases were put into effect. Although the regulatory burden of dealing with a workload of this magnitude has been severe, it is apparent that the more difficult problems facing the regulatory agencies for the future transcend the traditional problems of rate and economic regulation. In general, these problems encompass the need to assure an adequate and reliable power supply without undue adverse impact upon the environment. It is apparent that the interests of the consumer, the utility supplier and the general public in a healthy economy served by adequate and reliable power resources depend upon the timely and effective resolution of these problems.

ELECTRIC CAPACITY AND GENERATION

FIGURE 1

GENERATING CAPACITY



SOURCE: EEI, Statistical Year Book, 1974.

TABLE 1

INSTALLED GENERATING CAPACITY IN THE UNITED STATES*

KILOWATTS IN THOUSANDS (NAME PLATE)

December 31st	Investor-Owned Utilities	Government and Cooperatives	Total Electric Utility Industry	Other Sources**	Total United States
1974p	376 052	99 936	475 988	19 373	495 361
1973r	346 476	93 399	439 875	19 377	459 252
1972p	314 859	84 747	399 606	18 851	418 457
1971p	286 879	80 517	367 396	19 306	386 702
1970	262 675	78 415	341 090	19 237	360 327
1969	240 078	73 271	313 349	19 257	332 606
1968	220 766	70 292	291 058	19 123	310 181
1967	203 580	65 672	269 252	18 933	288 185
1966	185 671	62 172	247 843	18 973	266 816
1965	177 570	58 557	236 127	18 393	254 520
1964	167 704	54 581	222 285	18 186	240 471
1963	158 448	52 101	210 549	18 208	228 757
1962	144 577	46 490	191 067	17 674	208 741
1961	136 749	43 919	180 668	17 750	198 418
1960	128 450	39 552	168 002	17 813	185 815
1959	118 999	37 842	156 841	17 511	174 352
1958	108 202	34 395	142 597	18 054	160 651
1957	97 376	31 747	129 123	17 098	146 221
1956	91 145	29 552	120 697	16 645	137 342

* Alaska and Hawaii included since 1963.

** Includes capacity of industrial, mine and railway electric power plants. Does not include the capacity of isolated plants in institutions, hotels, apartment houses, office buildings, amusement parks, etc., for which information is not available.

Source: Federal Power Commission. p Preliminary. r Revised.

SOURCE: EEI, Statistical Year Book, 1974.

TABLE 2

INSTALLED GENERATING CAPACITY—TOTAL ELECTRIC UTILITY INDUSTRY*

BY OWNERSHIP AND TYPE OF PRIME MOVER DRIVING THE GENERATOR

KILOWATTS IN THOUSANDS (NAME PLATE)

At Dec. 31	Total Electric Utility Industry	Investor-Owned Utilities	Cooperatives	Subtotal Government	Municipal Utilities	Federal	Power Districts, State Projects
TOTAL (*Capacity of Generators Driven by All Types of Prime Mover*)							
1974p	**475 988**	**376 052**	**7 531**	**92 405**	**27 323**	**45 846**	**19 236**
1973r	439 875	346 476	7 288	86 111	24 956	44 520	16 635
1972p	399 606	314 859	6 700	78 047	23 167	40 645	14 235
1971p	367 396	286 879	5 418	75 099	21 788	39 654	13 657
1970	341 090	262 675	5 162	73 253	20 941	38 718	13 594
1969	313 349	240 078	4 318	68 953	20 035	36 130	12 788
1968	291 058	220 786	3 434	66 858	19 429	34 956	12 473
1967	269 252	203 580	3 019	62 653	18 049	33 640	10 964
1966	247 843	185 671	2 758	59 414	16 548	32 608	10 258
1965	236 127	177 570	2 309	56 248	15 407	31 690	9 151
1964	222 285	167 704	2 017	52 564	15 199	28 343	9 022
1963	210 549	158 448	1 873	50 228	14 222	27 315	8 691
1962	191 067	144 577	1 537	44 953	12 929	24 315	7 709
1961	180 668	136 749	1 446	42 473	12 205	23 257	7 011
1960	168 002	128 450	1 390	38 162	11 499	22 350	4 313
1959	156 841	118 999	1 136	36 706	10 914	21 874	3 918
1958	142 597	108 202	977	33 418	9 817	20 436	3 165
1957	129 123	97 376	924	30 823	8 640	19 649	2 534
1956	120 697	91 145	795	28 757	8 325	18 336	2 096
HYDRO (*Capacity of Generators Driven by Water Wheels and Turbines*)							
1974p†	**63 589**	....	....	....	....	....	....
1973r	61 782	21 770	56	39 956	3 334	25 582	11 040
1972p	58 566	19 303	56	37 207	3 330	24 333	9 544
1971p	55 898	19 055	56	36 787	3 267	24 053	9 467
1970	55 056	18 850	56	36 150	3 195	23 499	9 456
1969	52 753	18 444	56	34 253	3 195	22 054	9 004
1968	51 168	18 337	57	32 774	3 177	20 905	8 692
1967	48 112	18 134	57	29 921	2 623	19 589	7 709
1966	44 977	16 381	57	28 539	2 005	19 531	7 003
1965	43 782	16 096	58	27 628	2 005	18 717	6 906
1964	42 188	15 296	58	26 834	1 979	17 947	6 908
1963	40 214	14 620	58	25 536	1 982	16 923	6 631
1962	37 342	13 629	47	23 666	1 651	16 149	5 866
1961	35 481	13 522	50	21 909	1 584	15 091	5 234
1960	32 367	13 359	46	18 962	1 521	14 637	2 804
1959	31 074	13 110	43	17 921	1 385	14 125	2 411
1958	29 359	12 458	44	16 857	1 385	13 697	1 775
1957	27 036	11 327	40	15 669	1 382	13 043	1 244
1956	25 654	10 948	40	14 666	1 384	12 135	1 147
CONVENTIONAL STEAM (*Capacity of Generators Driven by Steam Engines and Turbines*)							
1974p†	**375 736**	....	....	....	....	....	....
1973r	352 072	303 536	6 836	41 700	18 511	18 917	4 272
1972p	322 944	279 520	6 247	37 177	17 020	16 290	3 867
1971p	298 345	258 633	4 959	34 753	15 823	15 576	3 354
1970	275 191	236 792	4 761	33 638	15 141	15 194	3 303
1969	252 411	217 196	3 925	31 290	14 291	14 051	2 948
1968	233 095	199 285	3 031	30 779	13 807	14 026	2 946
1967	214 435	182 340	2 608	29 487	13 046	14 026	2 415
1966	197 415	167 370	2 348	27 697	12 230	13 052	2 415
1965	188 054	159 800	1 902	26 352	11 197	12 948	2 207
1964	175 871	150 753	1 617	23 501	11 056	10 371	2 074
1963	166 229	142 235	1 477	22 517	10 120	10 367	2 030
1962	149 943	129 556	1 169	19 218	9 265	8 141	1 812
1961	141 784	122 095	1 075	18 614	8 728	8 141	1 745
1960	132 521	114 148	1 032	17 341	8 176	7 689	1 476
1959	122 980	105 193	785	17 002	7 816	7 714	1 472
1958	110 528	95 060	645	14 823	6 771	6 697	1 355
1957	99 437	85 348	604	13 485	5 666	6 564	1 255
1956	92 591	79 597	484	12 510	5 438	6 159	913

TABLE 2 (Continued)

INSTALLED GENERATING CAPACITY—TOTAL ELECTRIC UTILITY INDUSTRY*

BY OWNERSHIP AND TYPE OF PRIME MOVER DRIVING THE GENERATOR

KILOWATTS IN THOUSANDS (NAME PLATE)

At Dec. 31	Total Electric Utility Industry	Investor-Owned Utilities	Cooperatives	Subtotal Government	Municipal Utilities	Federal	Power Districts, State Projects
	NUCLEAR STEAM (*Capacity of Generators Driven by Nuclear Reactors*)						
1974p	31 662	28 397	55	3 210	—	1 152	2 058
1973r	21 118	19 766	53	1 299	—	—	1 299
1972p	15 300	14 448	52	800	—	—	800
1971p	8 687	7 832	55	800	—	—	800
1970	6 493	5 693	—	800	—	—	800
1969	3 980	3 180	—	800	—	—	800
1968	2 817	2 017	—	800	—	—	800
1967	2 887	2 087	••	800••	••	—	800
1966	1 942	1 142••	••	800••	••	—	800
1965	926	926••	••	••	••	—	••
1964	906	906••	••	••	••	—	••
1963	861	861••	••	••	—	—	••
1962	734	734	—	—	—	—	—
1961	442	442	—	—	—	—	—
1960	297	297	—	—	—	—	—
1959	105	105	—	—	—	—	—
1958	105	105	—	—	—	—	—
1957	105	105	—	—	—	—	—
1956	—	—	—	—	—	—	—
	INTERNAL COMBUSTION (*Capacity of Generators Driven by Internal Combustion Engines*)						
1974p†	5 001	...	...	...	...	...	...
1973r	4 903	1 404	343	3 156	3 111	21	24
1972p	4 796	1 588	345	2 863	2 817	22	24
1971p	4 466	1 359	348	2 759	2 698	25	36
1970	4 350	1 340	345	2 665	2 605	25	35
1969	4 205	1 258	337	2 610	2 549	25	36
1968	3 978	1 127	346	2 505	2 445	25	35
1967	3 818	1 019	354	2 445	2 380	25	40
1966	3 509	778	353	2 378	2 313	25	40
1965	3 365	748	349	2 268	2 205	25	38
1964	3 320	749	342	2 229	2 164	25	40
1963	3 245	732	338	2 175	2 120	25	30
1962	3 048	658	321	2 069	2 013	25	31
1961	2 961	690	321	1 950	1 893	25	32
1960	2 817	646	312	1 859	1 802	24	33
1959	2 682	591	308	1 783	1 713	35	35
1958	2 605	579	288	1 738	1 661	42	35
1957	2 545	596	280	1 669	1 592	42	35
1956	2 452	600	271	1 581	1 503	42	36

* Alaska and Hawaii included since 1963.

•• Generator capacity of the following plants is included in Conventional Steam:
Piqua—Piqua Municipal Power Plant, Ohio
Elk River—Rural Cooperative Power Assoc., Minnesota
Sheldon—Consumer's Public Power District, Nebraska
Parr—South Carolina Electric & Gas Co., South Carolina

† Complete data not available at time of printing.

p Preliminary. r Revised. Source: Federal Power Commission.

SOURCE: EEI, Statistical Year Book, 1974.

TABLE 3

INSTALLED GENERATING CAPACITY—TOTAL ELECTRIC UTILITY INDUSTRY

BY STATES AND TYPE OF PRIME MOVER DRIVING THE GENERATOR

AT DECEMBER 31st, 1973 AND 1974—KILOWATTS IN THOUSANDS (NAME PLATE)

	Total Electric Utility Industry		Hydro		Conventional Steam		Nuclear Steam		Internal Combustion	
	1974p	1973r	1974p	1973r	1974p	1973r	1974p	1973r	1974p	1973r
Total United States	**475 988**	**439 875**	**63 589**	**61 782**	**375 736**	**352 072**	**31 662**	**21 118**	**5 001**	**4 903**
Maine	1 710	1 707	309	304	505	507	830	830	66	66
New Hampshire	1 560	1 146	380	380	1 177	763	—	—	3	3
Vermont	906	906	186	186	163	163	537	537	20	20
Massachusetts	8 841	7 776	1 639	1 014	6 211	5 777	840	840	151	145
Rhode Island	322	360	2	2	290	330	—	—	30	28
Connecticut	5 189	5 189	134	134	3 773	3 773	1 262	1 262	20	20
New England	*18 528*	*17 084*	*2 650*	*2 020*	*12 119*	*11 313*	*3 469*	*3 469*	*290*	*282*
New York	27 716	25 959	4 967	4 717	20 140	18 634	2 503	2 503	103	105
New Jersey	11 141	11 353	341	341	10 247	10 456	550	550	3	6
Pennsylvania	27 184	23 726	1 651	1 651	22 113	21 812	3 321	156	99	107
Middle Atlantic	*66 041*	*61 038*	*6 959*	*6 709*	*52 500*	*50 902*	*6 374*	*3 209*	*208*	*218*
Ohio	23 375	21 490	2	2	23 181	21 290	—	—	192	198
Indiana	13 021	12 502	93	93	12 864	12 341	—	—	64	68
Illinois	24 830	23 985	32	32	18 831	19 103	5 717	4 607	250	243
Michigan	17 060	15 962	2 322	1 993	13 506	12 746	887	887	345	336
Wisconsin	8 356	7 664	366	366	6 260	6 102	1 638	1 101	92	95
East North Central	*86 642*	*81 603*	*2 815*	*2 486*	*74 642*	*71 582*	*8 242*	*6 595*	*943*	*940*
Minnesota	6 707	5 918	136	136	4 498	4 305	1 755	1 162	318	315
Iowa	4 830	4 107	130	131	3 682	3 526	550	—	468	450
Missouri	11 023	10 473	846	846	9 826	9 351	—	—	351	276
North Dakota	1 297	1 297	400	400	854	854	—	—	43	43
South Dakota	1 697	1 693	1 383	1 383	223	222	—	—	91	88
Nebraska	3 834	3 033	236	236	2 094	2 094	1 258	457	246	246
Kansas	5 798	5 449	2	2	5 313	4 970	—	—	483	477
West North Central	*35 186*	*31 970*	*3 133*	*3 154*	*26 490*	*25 322*	*3 563*	*1 619*	*2 000*	*1 895*
Delaware	1 511	1 455	—	—	1 500	1 444	—	—	11	11
Maryland	6 692	6 731	494	494	6 145	6 184	—	—	53	53
District of Columbia	1 279	1 279	3	3	1 276	1 276	—	—	—	—
Virginia	9 127	8 244	842	842	6 566	5 684	1 695	1 695	24	23
West Virginia	12 370	12 301	101	101	12 269	12 200	—	—	—	—
North Carolina	13 025	11 960	1 834	1 834	11 171	10 106	—	—	20	20
South Carolina	10 153	7 713	1 446	1 446	5 276	4 612	3 429	1 653	2	2
Georgia	10 895	9 144	1 056	1 056	9 837	8 086	—	—	2	2
Florida	21 373	19 064	30	30	19 579	17 278	1 520	1 520	244	236
South Atlantic	*86 426*	*77 891*	*5 806*	*5 806*	*73 619*	*66 870*	*6 644*	*4 868*	*356*	*347*
Kentucky	12 043	10 745	686	686	11 343	10 051	—	—	14	8
Tennessee	12 863	12 826	2 175	2 138	10 688	10 688	—	—	—	—
Alabama	13 928	11 824	2 508	2 508	10 268	9 316	1 152	—	—	—
Mississippi	3 268	3 269	—	—	3 264	3 264	—	—	4	5
East South Central	*42 102*	*38 664*	*5 369*	*5 332*	*35 563*	*33 319*	*1 152*	—	*18*	*13*
Arkansas	4 528	3 606	1 075	1 056	2 500	2 500	903	—	50	50
Louisiana	10 928	10 421	—	—	10 727	10 219	—	—	201	202
Oklahoma	7 085	6 496	963	963	5 962	5 370	—	—	160	163
Texas	37 580	33 965	517	517	36 814	33 199	—	—	249	249
West South Central	*60 121*	*54 488*	*2 555*	*2 536*	*56 003*	*51 288*	*903*	—	*660*	*664*
Montana	1 881	1 881	1 512	1 512	365	365	—	—	4	4
Idaho	1 697	1 656	1 635	1 646	50	—	—	—	12	10
Wyoming	2 340	1 835	220	220	2 105	1 598	—	—	15	17
Colorado	3 613	3 384	743	743	2 775	2 549	—	—	95	92
New Mexico	4 070	3 943	24	24	4 003	3 876	—	—	43	43
Arizona	6 349	5 044	2 079	2 079	4 256	2 951	—	—	14	14
Utah	1 225	780	197	198	993	546	—	—	35	36
Nevada	3 514	3 328	682	682	2 764	2 577	—	—	68	69
Mountain	*24 689*	*21 851*	*7 092*	*7 104*	*17 311*	*14 462*	—	—	*286*	*285*
Wasbington	15 426	15 422	13 041	12 911	1 580	1 662	800	843	5	6
Oregon	6 501	6 091	5 638	5 638	857	447	—	—	6	6
California	32 514	31 999	8 404	7 979	23 551	23 433	515	515	44	72
Pacific	*54 441*	*53 512*	*27 083*	*26 528*	*25 988*	*25 542*	*1 315*	*1 358*	*55*	*84*
Alaska	592	586	124	124	349	349	—	—	119	113
Hawaii	1 221	1 188	3	3	1 152	1 123	—	—	66	62
Alaska & Hawaii	*1 813*	*1 774*	*127*	*127*	*1 501*	*1 472*	—	—	*185*	*175*

p Preliminary. r Revised. Source: Federal Power Commission.

SOURCE: EEI, Statistical Year Book, 1974.

TABLE 4 —*Privately owned class A and class B electric utilities in the United States*

GENERATING PLANTS DECEMBER 31

Plant size interval in kilowatts	1973 Installed capacity (kilowatts)	1973 Number of plants	1972 Installed capacity (kilowatts)	1972 Number of plants
Steam plants:				
0 to 10,000	203,500	30	234,420	37
10,001 to 25,000	1,088,342	62	1,089,596	60
25,001 to 60,000	2,232,950	55	2,409,440	58
60,001 to 100,000	3,869,543	50	3,807,678	48
100,001 to 200,000	15,976,759	109	15,763,545	108
200,001 to 300,000	15,774,202	66	15,878,067	64
300,001 to 400,000	19,221,043	55	19,291,228	56
400,001 to 500,000	20,152,732	46	20,288,385	45
500,001 to 750,000	47,194,522	78	48,076,882	78
75,0001 to 1,000,000	38,186,044	44	35,608,925	40
Over 1,000,000	112,947,229	81	93,648,989	67
Total steam plants	276,846,866	676	256,097,155	661
Nuclear plants	19,745,012	25	13,122,903	21
Hydraulic plants:				
0 to 5,000	651,262	332	649,602	329
5,001 to 10,000	795,159	108	786,359	107
10,001 to 25,000	1,506,300	91	1,549,700	93
25,001 to 40,000	1,644,474	52	1,613,354	50
40,001 to 60,000	1,720,920	35	1,720,920	35
60,001 to 100,000	2,501,350	32	2,501,350	32
Over 100,000	12,650,767	50	10,086,667	49
Total hydraulic plants	21,470,232	700	18,907,952	695
Intercombustion engine plants:				
0 to 1,000	47,568	67	48,529	68
1,001 to 2,000	89,402	52	95,055	55
2,001 to 5,000	282,579	88	275,951	84
Over 5,000	2,692,914	112	1,927,847	105
Total internal combustion engine plants	3,112,463	319	2,347,382	312
Gas turbine plants	24,294,595	324	21,591,450	295
Total production plants	345,469,168	2,044	312,066,842	1,984

TABLE 5 —*Privately owned class A and class B electric utilities in the United States*

ELECTRIC ENERGY ACCOUNT, YEAR ENDED DECEMBER 31

(Thousands of kilowatt hours)

	1973	1972
Generation (excluding station use):		
Steam	1,265,038,068	1,190,217,563
Nuclear	78,008,105	56,470,346
Hydro—conventional	83,312,742	76,878,982
Hydro—pumped storage	6,632,141	3,376,762
Other	25,436,343	29,978,145
Net generation	1,458,427,399	1,356,921,798
Purchases	232,446,415	212,262,789
Interchanges:		
In (gross)	257,892,938	221,890,246
Out (gross)	(245,912,924)	(205,777,703)
Net	11,980,014	16,112,543
Transmission for/by others (wheeling):		
Received	51,339,060	51,363,714
Delivered	51,746,995	(52,000,077)
Net	(407,935)	(636,363)
Less energy used for pumped storage	(9,336,000)	(4,742,382)
Total net energy generated and received	1,693,109,893	1,579,918,385
Sales to ultimate consumers	1,340,682,009	1,244,393,613
Sales for resale	237,439,413	* 220,346,742
Energy furnished without charge	1,117,209	887,547
Used by company (excluding station use)	3,412,577	3,336,061
Losses	110,458,685	114,120,038

* 1972 amount revised in 1973

SOURCE: FPC, Statistics of Privately Owned, 1973.

Table 6.—*Privately owned class A and class B electric utilities in the United States, generating plants*- 1963-1973

Plant size interval in kilowatts	1973		1972		1971		1970		1969		1968		1967		1966		1965		1964		1963	
	Capacity, 1000's kilowatts	Number of stations	Capacity, 1000's kilowatts	Number of stations	Capacity, 1000's kilowatts	Number of stations	Capacity, 1000's kilowatts	Number of stations	Capacity, 1000's kilowatts	Number of stations	Capacity, 1000's kilowatts	Number of stations	Capacity, 1000's kilowatts	Number of stations	Capacity, 1000's kilowatts	Number of stations	Capacity, 1000's kilowatts	Number of stations	Capacity, 1000's kilowatts	Number of stations	Capacity, 1000's kilowatts	Number of stations
Steam plants																						
0 to 10,000	203	30	234	37	208	33	234	36	214	33	247	39	271	43	280	44	330	52	398	63	450	73
10,001 to 25,000	1,088	62	1,090	60	1,227	68	1,245	69	1,264	72	1,238	71	1,302	75	1,307	75	1,333	75	1,423	80	1,470	83
25,001 to 60,000	2,233	55	2,409	58	2,345	56	2,411	58	2,541	61	2,557	61	2,581	62	2,504	62	2,619	65	2,759	68	2,694	67
60,001 to 100,000	3,870	50	3,808	48	3,928	49	4,485	56	4,618	58	4,795	60	4,697	59	4,886	62	4,991	63	5,479	69	5,987	76
100,001 to 200,000	15,977	109	15,784	108	15,967	110	[1]15,676	109	16,943	116	[1]16,639	114	[1]16,634	114	[1]17,217	117	[1]16,900	115	[1]17,260	117	[1]17,332	117
200,001 to 300,000	15,774	66	15,878	64	17,074	71	17,288	72	17,329	70	18,125	74	18,791	77	19,340	79	19,898	81	18,708	76	20,067	81
300,001 to 400,000	19,221	55	19,291	56	19,639	58	20,670	60	21,066	61	21,864	63	22,132	64	23,103	67	23,530	68	22,590	65	23,434	67
400,001 to 500,000	20,153	46	20,288	45	21,812	48	20,661	46	20,166	45	21,488	48	22,697	51	22,233	50	20,081	45	19,258	43	17,055	38
500,001 to 750,000	47,195	78	48,077	78	47,606	78	44,785	74	42,062	68	39,478	65	37,619	62	34,155	56	32,102	54	31,183	52	27,343	46
750,001 to 1,000,000	38,186	44	35,609	40	35,196	40	30,529	34	25,462	29	22,358	26	20,581	24	17,116	20	16,310	18	14,559	17	12,089	14
Over 1,000,000	112,947	81	93,649	67	77,075	55	62,552	47	58,285	43	47,998	36	33,418	26	24,764	19	21,047	17	16,762	14	14,388	12
Total steam plants	276,847	676	266,097	661	242,077	666	220,536	661	209,950	656	196,787	657	180,726	657	167,105	651	159,141	653	150,379	664	142,309	674
Nuclear plants	19,745	25	13,123	21	7,770	15	5,622	13	3,110	10	1,940	8	1,415	8	931	8	856	7	836	7	836	7
Hydraulic plants																						
0 to 5,000	651	332	650	329	663	336	654	336	685	354	703	369	690	373	695	386	701	393	747	432	767	462
5,001 to 10,000	795	108	786	107	796	108	802	109	803	109	799	108	815	110	815	110	806	109	799	108	792	107
10,001 to 25,000	1,506	91	1,550	93	1,550	93	1,613	94	1,553	93	1,577	94	1,577	94	1,624	97	1,612	96	1,611	96	1,634	97
25,001 to 40,000	1,665	52	1,813	50	1,585	49	1,586	50	1,693	52	1,693	52	1,653	51	1,608	50	1,573	49	1,573	49	1,508	47
40,001 to 60,000	1,721	35	1,721	35	1,721	35	1,623	32	1,678	34	1,678	34	1,678	34	1,721	35	1,828	37	1,728	35	1,728	35
60,001 to 100,000	2,501	32	2,501	32	2,502	32	2,593	35	2,496	31	2,496	32	2,516	32	2,343	30	2,348	30	2,272	29	2,256	29
Over 100,000	12,651	50	10,087	49	10,002	49	[2]9,767	46	[2]9,344	46	[2]9,220	45	[2]8,947	45	[2]7,343	41	[2]6,972	40	[2]6,313	37	5,715	35
Total hydraulic plants	21,470	700	18,908	695	18,819	702	18,638	702	18,252	719	18,166	734	17,876	739	16,149	749	15,840	754	15,043	786	14,400	812
Internal combustion plants																						
0 to 1,000	47	67	48	88	46	67	52	77	54	79	55	81	55	83	49	82	48	81	49	83	54	99
1,000 to 2,000	89	52	95	55	98	57	103	60	119	66	121	69	111	67	115	70	125	77	125	77	125	78
2,001 to 5,000	283	88	278	84	273	84	282	86	279	84	265	79	281	81	249	74	251	76	258	77	250	74
Over 5,000	2,693	112	1,928	105	1,623	92	1,987	89	1,721	80	1,507	68	576	58	347	41	308	36	736	61	602	54
Total internal combustion engine plants	3,112	319	2,347	312	2,040	300	2,424	312	2,173	309	1,948	297	1,023	289	760	267	732	270	1,168	298	1,031	305
Gas turbine plants	24,295	324	21,592	295	17,499	266	12,442	235	7,745	199	4,380	147	2,798	101	1,380	51	909	40	[3]	-----	[3]	-----
Total production plants	345,469	2,044	312,067	1,984	288,205	1,949	259,662	1,923	241,230	1,893	223,221	1,843	203,838	1,794	186,325	1,726	177,478	1,724	167,426	1,755	158,576	1,798

[1] Includes 60,000 kw. nuclear fueled capacity in conventional steam plant.
[2] Includes 408,000 kw. pumped storage—1 plant, 1964; 962,786 kw. 3 plants, 1965; 1,178,911 kw 3 plants, 1966; 1,478,911 kw.—4 plants, 1967; 1,678,911 kw.—5 plants, 1968; 2,363,011 kw.—6 plants, 1969; 2,701,311 kw —6 plants, 1970
[3] Included in internal combustion plants.

SOURCE: FPC, Statistics of Privately Owned, 1973.

TABLE 7 -*Municipal electric utilities* [1]

GENERATING STATIONS

Type of prime mover	1973 Installed capacity (kilowatts)	1973 Number of stations	1972 Installed capacity (kilowatts)	1972 Number of stations
Steam	21,092,334	193	20,170,038	200
Nuclear	1,407,000	2	926,000	1
Hydraulic	7,515,399	160	9,095,144	162
Internal combustion engine	3,188,941	163	2,574,550	175
Total	33,203,674	518	32,765,732	538

[1] Exclusive of the Power Authority of the State of New York.

SOURCE: FPC, Publicly Owned, 1973.

TABLE 8 —*Municipal electric utilities* [1]

ELECTRIC ENERGY ACCOUNT

[Thousands of kilowatt-hours]

Source and disposition	1973	1972
Generation (excluding station use):		
Steam	77,831,394	71,050,037
Nuclear	5,173,728	2,923,646
Hydraulic	32,566,731	42,499,480
Internal combustion engine	3,472,635	4,011,152
Total generation	119,044,488	120,484,315
Purchases	111,350,844	108,475,551
Interchanges:		
In (gross)	10,284,507	9,328,286
Out (gross)	8,190,514	7,484,549
Net	2,093,993	1,843,737
Transmission for/by others (wheeling):		
Received	4,370,601	6,002,424
Delivered	4,011,424	5,763,019
Net	359,177	239,405
Total net energy generated, purchased and received	232,848,502	231,043,008
Sales to ultimate consumers	178,763,751	170,772,173
Sales for resale	40,398,938	44,895,238
Energy furnished without charge	614,805	1,032,247
Used by utility (excluding station use)	856,663	1,191,332
Losses	12,214,345	13,152,018

[1] Exclusive of the Power Authority of the State of New York.

TABLE 9 —*Municipal electric utilities* [1]

GENERATING STATIONS

Type of prime mover	1973		1972		1971		1970		1969		1968		1967	
	Installed capacity (kilowatts)	Number of stations	Installed capacity (kilowatts)	Number of stations	Installed capacity (kilowatts)	Number of stations	Installed capacity (kilowatts)	Number of stations	Installed capacity (kilowatts)	Number of stations	Installed capacity (kilowatts)	Number of stations	Installed capacity (kilowatts)	Number of stations
Steam	21,092,334	193	20,170,038	200	19,222,235	200	16,951,611	200	16,410,306	203	16,066,073	196	15,486,812	198
Nuclear	1,407,000	2	926,000	1	926,000	1	926,000	1	926,000	1	926,000	1		
Hydraulic	7,515,399	160	9,095,144	162	8,828,356	158	8,203,529	155	8,086,619	156	8,049,305	154	6,735,767	145
Internal combustion engine	3,188,941	163	2,574,550	175	1,886,175	163	1,589,344	156	1,446,239	152	1,195,980	132	1,082,929	141
Total	33,203,674	518	32,765,732	538	30,862,766	522	27,670,484	512	26,869,164	512	26,237,358	483	23,305,508	484

Type of prime mover	1966		1965		1964		1963	
	Installed capacity (kilowatts)	Number of stations	Installed capacity (kilowatts)	Numbe of stations	Installed capacity (kilowatts)	Number of stations	Installed capacity (kilowatts)	Number of stations
Steam	13,439,235	191	12,637,802	186	11,308,886	176	10,426,878	178
Nuclear								
Hydraulic	5,550,382	141	5,577,642	143	5,550,992	134	4,493,026	128
Internal combustion engine	999,228	130	890,613	120	755,539	109	682,802	112
Total	19,988,845	462	19,106,057	449	17,615,417	419	15,602,706	418

[1] Exclusive of the Power Authority of New York.

SOURCE: FPC, Publicly Owned, 1973.

TABLE 10—*Municipal electric utilities* [1]

ELECTRIC ENERGY ACCOUNT

[Millions of kilowatt-hours]

Source and disposition	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963
Generation (excluding station use):											
Steam	77,831	71,050	65,300	59,450	55,340	51,702	47,384	42,223	36,165	39,323	36,856
Nuclear	5,174	2,924	1,695	3,068	3,650	2,441	------	[2] 2	[2] 22	[2] 90	[2] 75
Hydraulic	32,567	42,499	39,814	40,352	41,648	38,218	29,555	25,448	24,876	24,496	20,040
Internal combustion engine	3,473	4,011	4,583	2,464	2,102	1,640	1,645	1,671	1,453	1,301	1,163
Total net generation	119,045	120,484	111,392	105,334	102,740	94,001	78,584	69,344	64,516	65,210	58,134
Purchases	111,351	108,476	102,781	95,165	84,298	77,427	72,971	70,758	63,689	52,895	48,957
Interchanges:											
In (gross)	10,285	9,328	7,044	7,909	8,197	4,961	3,052	2,913	3,077	2,836	2,205
Out (gross)	8,191	7,484	5,503	6,276	7,262	3,440	1,925	1,711	1,838	1,423	2,047
Net	2,094	1,844	1,541	1,633	935	1,521	1,127	1,202	1,239	1,413	158
Transmission for/by other (wheeling):											
Received	4,371	6,002	5,598	2,589	4,115	2,789	2,573	1,445	2,762	1,140	1,722
Delivered	4,012	5,763	5,373	2,409	3,936	2,706	2,531	1,405	2,749	1,129	1,723
Net	359	239	225	180	179	83	42	40	13	11	(1)
Total net energy generated, purchased, and received	232,849	231,043	215,939	202,312	188,152	173,032	152,724	141,344	129,457	119,529	107,248
Sales to ultimate consumers	178,764	170,772	159,508	148,335	136,848	125,374	114,476	106,586	97,485	89,573	81,747
Sales for resale	40,399	44,895	43,112	41,426	40,122	36,680	28,171	25,989	24,149	21,768	18,504
Furnished without charge	615	1,032	929	1,177	1,003	975	950	199	223	770	160
Used by utility (excluding stations use)	857	1,192	1,061	697	459	547	339	375	266	242	229
Losses	12,214	13,152	11,329	10,677	9,720	9,456	8,788	8,195	7,334	7,176	6,608

[1] Exclusive of the Power Authority of New York.
[2] Test energy.

SOURCE: FPC, Publicly Owned, 1973.

TABLE 11

ELECTRICITY MADE AVAILABLE IN THE UNITED STATES

KILOWATT-HOURS IN MILLIONS

Year	Generation					Net Imports of Electric Energy	Total Available in U.S.	Estimated Population† (Thousands) (July 1)	Kwhr Per Person
	Investor-Owned Utilities	Government and Cooperatives	Total Electric Utility Industry	Other Sources*	Total United States				
1974p.....	1 441 014	423 947	1 864 961	102 688	1 967 649	12 514	1 980 163	211 389	9 367
1973r.....	1 448 850	407 356	1 856 216	102 529	1 958 745	14 278	1 973 023	209 860	9 402
1972.....	1 356 677p	390 646p	1 747 323p	106 067p	1 853 390p	7 744	1 861 134p	208 234r	8 938
1971.....	1 250 005p	363 931p	1 613 936p	103 585p	1 717 521p	3 530	1 721 051p	206 219r	8 346
1970.....	1 183 190	348 419	1 531 609	108 162	1 639 771	1 960	1 641 731	203 810r	8 055
1969.....	1 102 162	340 020	1 442 182	110 575	1 552 757	1 072	1 553 829	201 385	7 716
1968.....	1 019 313	310 130	1 329 443	106 586	1 436 029	(631)	1 435 398	199 399	7 199
1967.....	928 439	285 926	1 214 365	102 935	1 317 300	(299)	1 317 001	197 457	6 670
1966.....	880 837	263 513	1 144 350	105 094	1 249 444	1 092	1 250 536	195 576	6 394
1965.....	809 474	245 778	1 055 252	102 331	1 157 583	(141)	1 157 442	193 526	5 981
1964.....	756 183	227 807	983 990	99 751	1 083 741	1 955	1 085 696	191 141	5 680
1963.....	701 253	215 540	916 793	94 624	1 011 417	98	1 011 515	188 483	5 367
1962.....	653 070	201 703	854 773	91 709	946 482	536	947 018	185 771	5 098
1961.....	606 737	187 536	794 273	87 222	881 495	2 254	883 749	182 992	4 829
1960.....	580 286	175 088	755 374	88 814	844 188	4 535	848 723	179 979	4 716

* Includes generation of industrial, mine and railway electric power plants. Does not include the generation of isolated plants in institutions, hotels, apartment houses, office buildings, amusement parks, etc., for which information is not available.

† U.S. Bureau of Labor estimates; excludes Armed Forces overseas.

p Preliminary. r Revised. ( ) Denotes negative figure.

Source: Federal Power Commission.

SOURCE: EEI, Statistical Year Book, 1974.

TABLE 12

GENERATION—TOTAL ELECTRIC UTILITY INDUSTRY*

BY OWNERSHIP AND TYPE OF PRIME MOVER DRIVING THE GENERATOR

KILOWATT-HOURS IN MILLIONS

Year	Total Electric Utility Industry	Investor-Owned Utilities	Cooperatives	Subtotal Government	Municipal Utilities	Federal	Power Districts, State Projects
			TOTAL (*Generation by All Types of Prime Mover*)				
1974p	1 864 961	1 441 014	33 845	390 102	78 500	219 622	91 980
1973r	1 856 216	1 448 860	35 127	372 229	80 872	211 715	79 642
1972p	1 747 323	1 356 677	31 610	359 036	78 922	206 736	73 378
1971p	1 613 936	1 250 005	27 228	336 703	72 535	194 490	69 678
1970	1 531 609	1 183 190	23 459	324 960	71 394	185 753	67 813
1969	1 442 182	1 102 162	17 513	322 507	69 614	183 245	69 648
1968	1 329 443	1 019 313	14 140	295 990	63 804	170 834	61 352
1967	1 214 365	928 439	12 389	273 537	57 788	162 399	53 350
1966	1 144 350	880 837	11 175	252 338	52 627	153 067	46 644
1965	1 055 252	809 474	8 571	237 207	49 940	145 231	42 036
1964	983 990	756 183	7 934	219 873	50 263	129 936	39 674
1963	916 793	701 253	6 949	208 591	46 293	124 340	37 958
1962	852 314	651 016	6 063	195 235	41 888	115 776	37 771
1961	792 039	604 883	5 241	181 915	38 753	112 177	30 985
1960	753 350	578 600	4 962	169 788	36 924	112 321	20 543
1959	710 006	544 234	4 404	161 368	34 618	109 052	17 698
1958	645 098	490 402	3 422	151 274	28 329	110 437	12 508
1957	631 507	480 943	3 029	147 535	27 851	109 175	10 509
1956	600 668	459 015	3 413	138 240	28 005	100 711	9 524
			HYDRO (*Generation of Generators Driven by Water Wheels and Turbines*)				
1974p	300 447	80 919	196	219 332	17 217	137 685	64 430
1973r	271 634	77 451	229	193 954	13 439	123 148	57 367
1972p	272 734	76 838	222	195 674	15 148	126 424	54 102
1971p	266 320	76 518	240	189 562	14 769	121 600	53 193
1970	247 456	70 587	214	176 655	14 453	110 695	51 507
1969	250 193	74 833	215	175 145	15 494	105 687	53 964
1968	222 491	67 201	239	155 051	13 043	94 874	47 134
1967	221 518	72 072	223	149 223	10 602	96 228	42 393
1966	194 756	62 827	214	131 715	8 106	86 260	37 349
1965	193 851	67 366	281	126 204	8 580	82 769	34 855
1964	177 073	60 323	219	116 531	8 460	75 771	32 300
1963	165 755	59 439	213	106 103	7 477	68 494	30 132
1962	168 283	62 786	225	105 272	6 215	68 276	30 781
1961	151 850	56 012	224	95 614	6 229	65 039	24 346
1960	145 516	60 447	234	84 835	5 814	64 764	14 257
1959	137 782	57 468	215	80 099	6 113	62 268	11 718
1958	140 262	59 211	175	80 876	5 360	67 705	7 811
1957	130 232	53 093	169	76 970	5 431	65 721	5 818
1956	122 029	54 980	163	66 886	6 140	55 867	4 879
			CONVENTIONAL STEAM (*Generation of Generators Driven by Steam Engines and Turbines*)				
1974p	1 445 785	1 260 987	32 886	151 912	56 610	75 638	19 664
1973r	1 494 901	1 292 888	34 108	167 905	62 422	88 240	17 243
1972p	1 413 882	1 227 847	30 609	155 426	58 774	80 296	16 356
1971p	1 303 465	1 137 276	26 249	139 940	53 141	72 867	13 932
1970	1 256 294	1 092 564	22 610	141 120	52 380	75 048	13 692
1969	1 172 481	1 016 361	16 760	139 360	49 800	77 544	12 016
1968	1 089 239	942 927	13 332	132 980	46 744	75 927	10 309
1967	980 336	850 541	11 434	118 361	43 292	66 136	8 933
1966	938 910	813 329	10 104	115 477	40 405	66 769	8 303
1965	852 655	738 319	7 401	106 935	37 333	62 419	7 183
1964	798 564	692 416	6 855	99 293	37 891	54 123	7 279
1963	742 780	638 431	5 915	98 434	34 893	55 794	7 747
1962	676 956	585 724	5 101	86 131	31 685	47 458	6 988
1961	633 872	546 954	4 313	82 605	28 871	47 096	6 638
1960	602 824	517 373	4 073	81 378	27 582	47 512	6 284
1959	567 651	486 345	3 552	77 754	25 041	46 735	5 978
1958	500 599	430 765	2 724	67 110	19 749	42 665	4 696
1957	497 203	427 490	2 358	67 355	19 279	43 393	4 683
1956	474 552	403 660	2 690	68 202	18 789	44 773	4 640

TABLE 12 (Continued)

GENERATION—TOTAL ELECTRIC UTILITY INDUSTRY*

BY OWNERSHIP AND TYPE OF PRIME MOVER DRIVING THE GENERATOR

KILOWATT-HOURS IN MILLIONS

Year	Total Electric Utility Industry	Investor-Owned Utilities	Cooperatives	Subtotal Government	Municipal Utilities	Federal	Power Districts, State Projects
			NUCLEAR STEAM (*Generation of Generators Driven by Nuclear Reactors*)				
1974p.....	112 740	98 252	314	14 174	—	6 289	7 885
1973r.....	83 334	77 790	199	5 345	—	314	5 031
1972p.....	54 031	50 873	239	2 919	—	—	2 919
1971p.....	37 899	35 151	196	2 552	—	—	2 552
1970.....	21 797	19 063	120	2 614	—	—	2 614
1969.....	13 928	10 261	—	3 667	—	—	3 667
1968.....	12 528	8 611	15	3 902	—	—	3 902
1967.....	7 655	5 499	141	2 015	—	—	2 015
1966.....	5 520	4 400	129	991	2	—	989
1965.....	3 657	3 497	143	17	22	—	(5)
1964.....	3 343	3 179	56	108	17	—	91
1963.....	3 212	3 136	1	75	—	—	75
1962.....	2 270	2 270	—	—	—	—	—
1961.....	1 692	1 692	—	—	—	—	—
1960.....	518	518	—	—	—	—	—
1959.....	188	188	—	—	—	—	—
1958.....	165	165	—	—	—	—	—
1957.....	10	10	—	—	—	—	—
1956.....	—	—	—	—	—	—	—
			INTERNAL COMBUSTION (*Generation of Generators Driven by Internal Combustion Engines*)				
1974p.....	5 989	856	449	4 684	4 673	10	1
1973r.....	6 347	731	591	5 025	5 011	13	1
1972p.....	6 676	1 119	540	5 017	5 000	16	1
1971p.....	6 252	1 060	543	4 649	4 625	23	1
1970.....	6 062	976	515	4 571	4 561	10	—
1969.....	5 580	707	538	4 335	4 320	14	1
1968.....	5 185	574	554	4 057	4 017	33	7
1967.....	4 856	327	591	3 938	3 894	35	9
1966.....	5 164	281	728	4 155	4 114	38	3
1965.....	5 089	292	746	4 051	4 005	43	3
1964.....	5 010	265	804	3 941	3 895	42	4
1963.....	5 046	247	820	3 979	3 923	52	4
1962.....	4 805	236	737	3 832	3 788	42	2
1961.....	4 625	225	704	3 696	3 653	42	1
1960.....	4 492	262	655	3 575	3 528	45	2
1959.....	4 385	233	637	3 515	3 464	49	2
1958.....	4 072	261	523	3 288	3 220	67	1
1957.....	4 062	350	502	3 210	3 141	61	8
1956.....	4 087	375	560	3 152	3 076	71	5

* Alaska and Hawaii included since 1963.
p Preliminary. r Revised. ( ) Denotes negative figure. Source: Federal Power Commission.

SOURCE: EEI, Statistical Year Book, 1974.

TABLE 13

GENERATION—TOTAL ELECTRIC UTILITY INDUSTRY

BY STATES AND TYPE OF PRIME MOVER DRIVING THE GENERATOR

1973 AND 1974—KILOWATT-HOURS IN MILLIONS

	Total Electric Utility Industry		Hydro		Conventional Steam		Nuclear Steam		Internal Combustion	
	1974p	1973r	1974p	1973r	1974p	1973r	1974p	1973r	1974p	1973r
Total United States	1 864 961	1 856 216	300 447	271 634	1 445 785	1 494 901	112 740	83 334	5 989	6 347
Maine	7 557	7 853	1 756	1 853	2 201	2 610	3 574	3 351	26	39
New Hampshire	4 637	5 245	1 292	1 435	3 345	3 810	—	—	—	—
Vermont	3 605	2 771	920	994	193	167	2 482	1 598	10	12
Massachusetts	28 816	33 874	359	489	25 359	28 039	2 885	5 120	213	226
Rhode Island	1 231	1 204	4	5	1 202	1 177	—	—	25	22
Connecticut	23 391	21 129	422	440	14 983	16 373	7 970	4 303	16	13
New England	*69 237*	*72 076*	*4 753*	*5 216*	*47 283*	*52 176*	*16 911*	*14 372*	*290*	*312*
New York	103 750	105 778	28 639	29 154	65 584	69 126	9 273	7 226	254	272
New Jersey	32 960	36 261	(285)	(337)	29 572	33 013	3 673	3 585	—	—
Pennsylvania	98 884	103 841	1 391	1 371	90 451	102 060	6 998	362	44	48
Middle Atlantic	*235 594*	*245 880*	*29 745*	*30 188*	*185 607*	*204 199*	*19 944*	*11 173*	*298*	*320*
Ohio	98 191	99 920	10	8	98 033	99 699	—	—	148	213
Indiana	56 862	59 524	445	480	56 366	58 996	—	—	51	48
Illinois	91 453	92 514	106	113	71 342	71 906	19 592	20 051	413	444
Michigan	61 452	62 561	1 050	890	59 350	58 286	416	2 834	636	551
Wisconsin	32 559	28 734	1 706	2 107	22 536	20 604	8 256	5 952	61	71
East North Central	*340 517*	*343 253*	*3 317*	*3 598*	*307 627*	*309 491*	*28 264*	*28 837*	*1 309*	*1 327*
Minnesota	22 171	21 435	736	872	16 834	16 937	4 363	3 270	238	356
Iowa	15 545	15 587	890	905	13 283	14 194	931	—	441	488
Missouri	38 025	38 931	1 713	2 007	36 022	36 529	—	—	290	395
North Dakota	8 475	7 776	2 729	2 382	5 746	5 392	—	—	—	2
South Dakota	6 324	5 539	5 624	4 795	684	722	—	—	16	22
Nebraska	12 302	9 648	1 293	1 370	6 659	7 321	3 996	600	354	357
Kansas	18 200	17 521	7	3	17 438	16 686	—	—	755	832
West North Central	*121 042*	*116 437*	*12 992*	*12 354*	*96 666*	*97 781*	*9 290*	*3 870*	*2 094*	*2 452*
Delaware	6 741	5 801	—	—	6 741	5 794	—	—	—	7
Maryland	28 542	27 646	1 690	2 164	26 752	25 375	—	—	100	107
District of Columbia	2 405	3 264	1	1	2 404	3 263	—	—	—	—
Virginia	33 781	35 716	1 045	1 270	26 758	27 561	5 953	6 858	25	27
West Virginia	61 505	56 530	477	497	61 028	56 033	—	—	—	—
North Carolina	58 520	62 178	6 887	7 107	51 625	55 067	—	—	8	4
South Carolina	31 159	28 029	3 413	3 862	16 689	18 001	11 057	6 166	—	—
Georgia	37 611	35 916	3 606	4 178	33 962	31 738	43	—	—	—
Florida	75 881	76 280	252	234	67 348	71 094	7 877	4 681	404	271
South Atlantic	*336 145*	*331 360*	*17 371*	*19 313*	*293 307*	*293 926*	*24 930*	*17 705*	*537*	*416*
Kentucky	53 543	52 949	3 398	3 823	50 145	49 126	—	—	—	—
Tennessee	52 705	59 524	11 767	11 452	40 938	48 072	—	—	—	—
Alabama	58 046	56 060	10 344	11 778	41 413	43 968	6 289	314	—	—
Mississippi	11 462	11 060	—	—	11 462	11 060	—	—	—	—
East South Central	*175 756*	*179 593*	*25 509*	*27 053*	*143 958*	*152 226*	*6 289*	*314*	—	—
Arkansas	12 172	12 964	4 263	4 236	7 542	8 715	361	—	6	13
Louisiana	39 506	41 474	—	—	39 138	41 133	—	—	368	341
Oklahoma	33 129	30 497	3 590	3 761	29 347	26 502	—	—	192	234
Texas	142 263	135 000	1 631	1 700	140 311	132 963	—	—	321	337
West South Central	*227 070*	*219 935*	*9 484*	*9 697*	*216 338*	*209 313*	*361*	—	*887*	*925*
Montana	11 055	9 136	9 725	7 520	1 330	1 616	—	—	—	—
Idaho	9 694	8 223	9 686	8 222	8	—	—	—	—	1
Wyoming	10 803	10 395	1 411	1 140	9 391	9 252	—	—	1	3
Colorado	15 650	14 526	1 414	1 281	14 099	13 093	—	—	137	152
New Mexico	20 122	19 420	74	65	19 971	19 238	—	—	77	117
Arizona	20 528	17 540	7 393	7 187	13 124	10 338	—	—	11	15
Utah	3 999	3 626	941	1 111	3 047	2 500	—	—	11	15
Nevada	13 771	13 845	1 601	1 669	12 159	12 162	—	—	11	14
Mountain	*105 622*	*96 711*	*52 245*	*28 195*	*73 129*	*68 199*	—	—	*248*	*317*
Washington	90 407	78 565	82 304	68 844	4 213	5 290	3 890	4 431	—	—
Oregon	36 049	28 441	35 964	28 139	85	302	—	—	—	—
California	120 363	137 134	46 420	38 751	71 071	95 736	2 861	2 632	11	15
Pacific	*246 819*	*244 140*	*164 688*	*135 734*	*76 369*	*101 328*	*6 751*	*7 063*	*11*	*15*
Alaska	1 871	1 744	326	286	1 383	1 306	—	—	162	152
Hawaii	5 288	5 087	17	20	5 118	4 956	—	—	153	111
Alaska & Hawaii	*7 159*	*6 831*	*343*	*306*	*6 501*	*6 262*	—	—	*315*	*263*

Source: Federal Power Commission. p Preliminary. r Revised. ( ) Denotes negative figure.

SOURCE: EEI, Statistical Year Book, 1974.

TABLE 14

GENERATION BY FUEL—TOTAL ELECTRIC UTILITY INDUSTRY

BY STATES AND KINDS OF FUEL

YEAR 1974p—KILOWATT-HOURS IN MILLIONS

	Total Thermal*	Coal	Fuel Oil	Gas	Nuclear Fuel
Total United States	**1 561 810**	**829 839**	**299 296**	**319 935**	**112 740**
Maine	5 801	—	2 227	—	3 574
New Hampshire	3 346	2 338	980	28	—
Vermont	2 685	59	56	88	2 482
Massachusetts	28 457	2 279	22 739	554	2 885
Rhode Island	1 227	63	1 010	154	—
Connecticut	22 969	408	14 553	38	7 970
New England	*64 486*	*5 147*	*41 565*	*862*	*16 911*
New York	75 111	14 808	48 095	2 935	9 273
New Jersey	33 245	7 389	20 894	1 289	3 673
Pennsylvania	97 492	78 323	11 629	542	6 998
Middle Atlantic	*205 848*	*100 520*	*80 618*	*4 766*	*19 944*
Ohio	98 179	94 456	2 330	1 393	—
Indiana	56 417	53 791	1 475	1 151	—
Illinois	91 347	62 740	5 359	3 656	19 592
Michigan	60 401	48 394	7 433	4 158	416
Wisconsin	30 853	19 768	357	2 472	8 256
East North Central	*337 197*	*279 149*	*16 954*	*12 830*	*28 264*
Minnesota	21 430	13 383	679	3 005	4 363
Iowa	14 621	8 633	197	4 860	931
Missouri	36 313	32 142	270	3 901	—
North Dakota	5 746	5 733	11	2	—
South Dakota	700	421	37	242	—
Nebraska	11 008	2 532	379	4 101	3 996
Kansas	18 193	2 948	988	14 257	—
West North Central	*108 011*	*65 792*	*2 561*	*30 368*	*9 290*
Delaware	6 740	2 346	4 309	85	—
Maryland	26 852	10 001	15 989	862	—
District of Columbia	2 404	479	1 925	—	—
Virginia	32 736	10 666	15 865	252	5 953
West Virginia	61 028	60 363	643	22	—
North Carolina	51 633	48 798	2 747	88	—
South Carolina	27 746	11 508	3 395	1 786	11 057
Georgia	34 005	26 564	3 893	3 505	43
Florida	75 630	13 874	39 894	13 985	7 877
South Atlantic	*318 774*	*184 599*	*88 660*	*20 585*	*24 930*
Kentucky	50 145	49 554	111	480	—
Tennessee	40 937	40 816	121	—	—
Alabama	47 702	40 724	265	424	6 289
Mississippi	11 462	3 327	4 640	3 495	—
East South Central	*150 246*	*134 421*	*5 137*	*4 399*	*6 289*
Arkansas	7 909	—	4 148	3 400	361
Louisiana	39 506	—	5 034	34 472	—
Oklahoma	29 540	1	111	29 428	—
Texas	140 536	6 867	3 152	130 517	—
West South Central	*217 491*	*6 868*	*12 445*	*197 817*	*361*
Montana	1 314	1 210	6	98	—
Idaho	9	—	4	5	—
Wyoming	9 392	9 208	77	107	—
Colorado	14 236	8 723	325	5 188	—
New Mexico	20 048	13 485	544	6 019	—
Arizona	13 134	4 681	4 734	3 719	—
Utah	3 058	2 793	36	229	—
Nevada	12 170	8 750	419	3 001	—
Mountain	*73 361*	*48 850*	*6 145*	*18 366*	—
Washington	8 103	4 188	25	—	3 890
Oregon	38	—	22	16	—
California	71 471	—	39 733	28 877	2 861
Pacific	*79 612*	*4 188*	*39 780*	*28 893*	*6 751*
Alaska	1 545	305	191	1 049	—
Hawaii	5 240	—	5 240	—	—
Alaska & Hawaii	*6 785*	*305*	*5 431*	*1 049*	—

* Excludes generation by geothermal, wood and waste.
p Preliminary.
Source: Federal Power Commission.

SOURCE: EEI, Statistical Year Book, 1974.

TABLE 15

GENERATION PER KILOWATT OF INSTALLED NAME PLATE CAPACITY

TOTAL ELECTRIC UTILITY INDUSTRY

BY OWNERSHIP AND TYPE OF PRIME MOVER DRIVING THE GENERATOR

KILOWATT-HOURS

Year	Total Electric Utility Industry	Investor-Owned	Cooperatives	Government-Owned	Total Electric Utility Industry	Investor-Owned	Cooperatives	Government-Owned
	Total				Hydro			
1974p*	4 073	3 989	4 568	4 370	4 793	...	...	...
1973r	4 422	4 382	5 022	4 535	4 590	3 771	4 089	5 027
1972p	4 556	4 509	5 217	4 689	4 850	4 006	3 964	5 289
1971p	4 556	4 549	5 147	4 539	4 801	4 037	4 286	5 198
1970	4 681	4 707	4 949	4 570	4 591	3 785	3 821	5 018
1969	4 772	4 783	4 518	4 749	4 815	4 069	3 805	5 226
1968	4 745	4 804	4 382	4 571	4 482	3 685	4 193	4 946
1967	4 697	4 770	4 289	4 482	4 759	4 176	3 912	5 105
1966	4 729	4 850	4 411	4 363	4 388	3 869	3 722	4 690
1965	4 604	4 689	3 963	4 360	4 510	4 292	4 845	4 635
1964	4 547	4 637	4 079	4 278	4 298	4 033	3 776	4 450
1963	4 561	4 623	4 070	4 380	4 270	4 207	3 822	4 307
	Steam				Internal Combustion			
1974p*	3 993	...	...	...	1 209	...	...	...
1973r	4 437	4 441	5 203	4 279	1 309	489	1 718	1 670
1972p	4 550	4 563	5 454	4 307	1 442	759	1 558	1 785
1971p	4 557	4 607	5 411	4 072	1 418	785	1 567	1 714
1970	4 751	4 803	5 234	4 321	1 417	751	1 510	1 733
1969	4 820	4 869	4 819	4 493	1 364	593	1 575	1 695
1968	4 862	4 934	4 734	4 425	1 330	535	1 583	1 639
1967	4 742	4 851	4 671	4 096	1 326	364	1 672	1 633
1966	4 864	4 967	4 816	4 247	1 502	368	2 074	1 789
1965	4 682	4 749	4 288	4 291	1 523	390	2 159	1 802
1964	4 664	4 720	4 467	4 320	1 526	358	2 365	1 790
1963	4 690	4 688	4 463	4 719	1 597	316	2 491	1 875

*Complete data not available at time of printing.
p Preliminary. r Revised. Source: Federal Power Commission data and EEI, Statistical Year Book, 1974.

TABLE 16

GENERATION IN PERCENT OF TOTAL—TOTAL ELECTRIC UTILITY INDUSTRY

BY OWNERSHIP AND TYPE OF PRIME MOVER DRIVING THE GENERATOR

Year	Investor-Owned	Co-operatives	Government-Owned	Total	Investor-Owned	Co-operatives	Government-Owned	Total	Investor-Owned	Co-operatives	Government-Owned
	TOTAL			HYDRO				CONVENTIONAL STEAM			
1974p	77.3	1.8	20.9	16.1	4.4	0.0	11.7	77.5	67.6	1.8	8.1
1973r	78.1	1.9	20.0	14.6	4.2	0.0	10.4	80.6	69.7	1.9	9.0
1972p	77.6	1.8	20.6	15.6	4.4	0.0	11.2	80.9	70.2	1.8	8.9
1971p	77.5	1.6	20.9	16.5	4.7	0.0	11.8	80.8	70.5	1.6	8.7
1970	77.3	1.5	21.2	16.2	4.7	0.0	11.5	82.0	71.3	1.5	9.2
1969	76.4	1.2	22.4	17.3	5.2	0.0	12.1	81.3	70.4	1.2	9.7
1968	76.7	1.0	22.3	16.8	5.1	0.0	11.7	81.9	70.9	1.0	10.0
1967	76.5	1.0	22.5	18.2	5.9	0.0	12.3	80.7	70.1	0.9	9.7
1966	77.0	1.0	22.0	17.0	5.5	0.0	11.5	82.1	71.1	0.9	10.1
1965	76.7	0.8	22.5	18.4	6.4	0.0	12.0	80.8	70.0	0.7	10.1
1964	76.8	0.8	22.4	18.0	6.1	0.0	11.9	81.2	70.4	0.7	10.1
1963	76.5	0.7	22.8	18.1	6.5	0.0	11.6	81.1	69.7	0.6	10.8
				NUCLEAR STEAM				INTERNAL COMBUSTION			
1974p				6.1	5.3	0.0	0.8	0.3	0.0	0.0	0.3
1973r				4.5	4.2	0.0	0.3	0.3	0.0	0.0	0.3
1972p				3.1	2.9	0.0	0.2	0.4	0.1	0.0	0.3
1971p				2.3	2.2	0.0	0.1	0.4	0.1	0.0	0.3
1970				1.4	1.2	0.0	0.2	0.4	0.1	0.0	0.3
1969				1.0	0.7	0.0	0.3	0.4	0.1	0.0	0.3
1968				1.0	0.7	0.0	0.3	0.3	0.0	0.0	0.3
1967				0.7	0.5	0.0	0.2	0.4	0.0	0.1	0.3
1966				0.5	0.4	0.0	0.1	0.4	0.0	0.1	0.3
1965				0.3	0.3	0.0	0.0	0.5	0.0	0.1	0.4
1964				0.3	0.3	0.0	0.0	0.5	0.0	0.1	0.4
1963				0.3	0.3	0.0	0.0	0.5	0.0	0.1	0.4

p Preliminary. r Revised. Source: Federal Power Commission data and EEI, Statistical Year Book, 1974.

TABLE 17

CAPABILITY*—PEAK LOAD—ENERGY OUTPUT

TOTAL ELECTRIC UTILITY INDUSTRY (EXCLUDING ALASKA AND HAWAII)

Year	Capability at Time of Summer Peak Load (Mw)	Non-Coincident Summer Peak Load (Mw)	Capability at Time of December Peak Load (Mw)	Non-Coincident December Peak Load (Mw)	Margin of Reserve Based on Non-Coincident Peak Load† (%)	Electric Energy Output (Kwhr in Millions)	Annual Load Factor Based on Peak Load (%)
1974.....	444 400	349 250	466 500	296 500	27.2	1 871 700	61.2
1973.....	415 500	343 900	432 500	289 400	20.8	1 868 800	62.0
1972.....	381 700	319 150	394 050	290 950	19.6	1 752 200	62.5
1971.....	353 250	292 100	366 700	261 650	20.9	1 617 100	63.2
1970.....	326 900	274 650	339 050	248 550	19.0	1 536 400	63.9
1969.....	300 300	257 650	311 450	236 600	16.6	1 446 000	64.1
1968.....	278 950	238 000	288 750	226 700	17.2	1 327 200	63.5
1967.....	257 950	213 450	267 750	205 850	20.8	1 221 500	65.3
1966.....	240 700	203 350	247 650	193 700	18.4	1 152 900	64.7
1965.....	228 900	186 300	235 700	180 400	22.9	1 060 100	65.0
1964.....	216 500	175 000	222 400	171 100	23.7	986 800	64.2
1963.....	205 300	159 450	210 000	161 300	30.2 (d)	921 800	65.2
1962.....	193 600	149 050	198 050	151 250	31.0 (d)	860 200	64.9
1961.....	184 700	141 000	188 600	140 700	31.0	799 800	64.8
1960.....	170 600	132 800	174 900	133 000	31.5 (d)	764 900	65.5

* Capability represents the maximum kilowatt output with all power sources available and with hydraulic equipment under actual water conditions. It must, therefore, provide the necessary allowance for maintenance, emergency outages, and system operating requirements. This rating is more indicative of the actual generating ability of existing power stations than the familiar name-plate rating as used in other tables of this publication.

† Calculated from the maximum non-coincident peak load, summer or December, and the capability at the time of this peak load.

(d) Indicates that the non-coincident peak load, summer or December, occurred during December of that year.

Source: Edison Electric Institute.

SOURCE: EEI, Statistical Year Book, 1974.

TABLE 18

1/
CAPACITY FACTORS FOR THE ELECTRIC UTILITY INDUSTRY
BY OWNERSHIP AND BY FUEL TYPE
1960, 1970, 1973, and 1974

		Total Fuel Types (1)	Steam Generation (2)	Hydro-Electric (3)	Nuclear Steam (4)	Internal Combustion (5)
Total industry:	1960	51.1%	51.9%	51.3%	19.9%	18.2%
	1970	51.3	52.1	51.3	38.3	15.9
	1973	48.2	48.5	50.2	45.0	14.8
	1974p	44.7	43.9	53.9	40.6	13.7
Investor owned:	1960	51.4	51.7	51.7	19.9	4.6
	1970	51.4	52.7	42.7	38.2	8.3
	1973	47.7	46.7	45.8	44.9	5.9
	1974p	43.7	n.a.	n.a.	39.4	n.a.
Cooperatively owned:	1960	40.8	45.5	58.1	--	24.0
	1970	51.9	54.2	43.6	--	17.0
	1973	55.0	57.0	46.7	42.9	19.7
	1974p	51.3	n.a.	n.a.	65.2	n.a.
Municipal:	1960	36.7	38.5	43.6	--	22.3
	1970	38.9	39.5	51.6	--	20.0
	1973	37.0	38.5	46.0	--	18.4
	1974p	32.8	n.a.	n.a.	--	n.a.
Federal projects:	1960	57.4	70.5	50.5	--	21.4
	1970	54.8	56.4	53.8	--	4.6
	1973	56.9	53.2	55.0	--	7.1
	1974p	54.7	n.a.	n.a.	62.3	n.a.
Power districts, State projects:	1960	54.4	48.6	58.0	--	*
	1970	56.9	47.3	62.2	37.3	*
	1973	54.7	46.1	59.3	44.2	*
	1974p	54.6	n.a.	n.a.	43.7	n.a.

1/ Capacity factor is defined as: $\frac{\text{Generation}}{\text{Capacity X hours in the year}}$

p - preliminary
* Less than one percent.
n.a. Not available.

Source: Based on data in EEI, Statistical Year Book, 1974.

TABLE 19—Primary energy purchase data during the past 12 months (October 1974 through September 1975) for steam electric plants

GEOGRAPHIC REGION AND STATE	LINE	TOTAL BTU (BILLIONS)				% OF TOTAL BTU			AVG. PRICE, ¢ PER 10^6 BTU			LINE
		COAL	OIL	GAS	TOTAL	COAL	OIL	GAS	COAL	OIL	GAS	
NEW ENGLAND												
CONNECTICUT	2	0.0	158,404.0	0.0	158,404.0	0.0	100.0	0.0	0.0	207.9	0.0	2
MAINE	5	0.0	18,250.A	0.0	18,250.6	0.0	100.0	0.0	0.0	179.5	0.0	5
MASSACHUSETTS	4	1A,517.4	246,518.1	807.9	2A5,843.4	A.5	93.4	0.5	126.3	199.0	155.4	4
NEW HAMPSHIRE	5	26,403.8	15,249.4	0.0	41,655.2	65.4	36.6	0.0	119.6	191.0	0.0	5
RHODE ISLAND	6	0.0	9,097.2	14.0	9,111.2	0.0	99.8	0.2	0.0	189.1	115.2	6
VERMONT	T	447.A	0.0	665.9	1,111.5	40.3	0.0	59.7	188.5	0.0	99.8	7
..... TOTAL	9	45,568.8	427,519.5	1,485.9	472,574.0	9.2	90.5	0.3	119.2	200.5	118.2	9
MIDDLE ATLANTIC												
NEW JERSEY	12	58,351.4	153,000.4	6,289.0	217,560.8	2A.8	70.3	2.9	162.4	217.2	92.5	12
NEW YORK	15	153,549.1	557,672.6	12,194.5	703,216.2	19.0	79.3	1.7	119.6	197.5	82.9	13
PENNSYLVANIA	14	812,7A9.0	94,650.6	10.3	907,450.0	89.6	10.4	0.0	94.6	222.0	147.5	14
..... TOTAL	16	1,004,469.5	805,525.7	18,413.8	1,828,207.0	54.9	44.0	1.0	101.9	204.1	96.1	16
EAST NORTH CENTRAL												
ILLINOIS	19	645,820.5	51,646.5	51,724.6	729,191.4	88.6	7.1	4.4	72.1	144.2	102.1	19
INDIANA	20	401,429.8	12,059.4	10,020.6	A25,509.7	96.5	1.9	1.6	58.0	202.4	76.3	20
MICHIGAN	21	469,685.2	100,29A.0	52,419.9	602,401.0	78.0	16.6	5.4	95.7	201.4	117.1	21
OHIO	22	9A7,529.5	12,756.1	4,565.0	984,850.7	98.2	1.3	0.5	99.3	224.1	112.3	22
WISCONSIN	25	254,965.5	2,011.0	17,141.0	254,117.3	92.5	0.8	A.7	84.9	176.3	75.9	25
..... TOTAL	25	2,919,426.1	178,768.9	95,871.0	3,194,066.1	91.4	5.6	3.0	82.7	186.5	100.3	25
WEST NORTH CENTRAL												
IOWA	28	112,408.6	1,072.0	41,299.5	154,780.0	72.6	0.7	26.7	83.2	198.7	64.5	28
KANSAS	29	55,211.5	21,868.7	118,197.8	193,277.9	27.5	11.3	61.2	65.5	1A7.6	45.2	29
MINNESOTA	30	144,422.9	5,047.1	17,250.9	1A6,720.9	86.6	3.0	10.5	59.0	208.1	60.7	30
MISSOURI	31	545,538.2	4,979.2	24,759.4	575,276.9	91.5	1.9	A.A	53.1	190.2	5A.0	31
NEBRASKA	32	54,255.6	4,264.1	31,039.7	89,537.4	49.2	A.1	44.6	81.5	176.7	60.5	32
NORTH DAKOTA	35	A2,612.0	88.8	82.5	A2,785.1	99.7	0.1	0.1	23.8	196.8	AA.4	35
SOUTH DAKOTA	34	15,777.3	1,010.1	1,961.2	18,748.6	84.2	5.4	10.5	47.2	222.7	62.1	34
..... TOTAL	36	766,204.0	40,350.0	254,590.6	1,041,124.7	73.6	3.9	22.5	58.1	179.9	55.0	36
SOUTH ATLANTIC												
DELAWARE	39	25,001.0	40,285.8	464.4	63,749.2	56.1	65.2	0.7	118.6	213.0	98.0	39
DISTRICT OF COLUMBIA	40	5,767.5	15,514.9	0.0	19,082.4	19.7	80.5	0.0	171.7	205.4	0.0	40
FLORIDA	41	125,224.2	409,770.8	139,332.2	674,327.3	18.6	60.8	20.7	96.1	187.7	67.8	41
GEORGIA	42	335,523.2	26,962.2	41,480.5	403,965.8	85.1	6.6	10.5	95.9	185.3	67.8	42
MARYLAND	45	92,778.4	121,546.6	0.0	214,324.9	43.3	56.7	0.0	137.0	187.7	0.0	43
NORTH CAROLINA	44	459,540.7	12,461.7	-20.6	472,029.0	97.4	2.6	0.0	114.5	193.7	158.2	44
SOUTH CAROLINA	45	106,465.5	28,016.9	2,517.5	136,999.7	77.7	20.5	1.8	124.5	117.5	69.4	45
VIRGINIA	46	77,222.5	174,256.6	467.2	251,925.2	30.7	69.2	0.2	121.0	183.5	99.6	46
WEST VIRGINIA	47	545,402.0	2,771.5	145.3	548,318.7	99.5	0.5	0.0	91.4	227.7	67.4	47
..... TOTAL	49	1,768,724.9	850,961.9	184,455.4	2,784,120.2	63.5	29.8	6.6	104.8	186.2	68.0	49
EAST SOUTH CENTRAL												
ALABAMA	52	432,911.0	2,602.1	6,835.8	442,546.9	97.9	0.6	1.5	92.1	215.5	105.3	52
KENTUCKY	55	515,437.1	666.7	960.4	515,064.2	99.7	0.1	0.2	65.1	226.2	AG.5	55
MISSISSIPPI	54	35,410.7	63,373.1	24,988.5	121,752.5	27.4	52.1	20.5	76.2	177.6	81.1	54
TENNESSEE	55	481,519.1	1,255.4	0.0	482,772.5	99.7	0.5	0.0	81.9	234.1	0.0	55
..... TOTAL	57	1,461,277.9	67,895.3	32,762.7	1,561,935.8	93.6	4.3	2.1	78.9	180.6	85.1	57
WEST SOUTH CENTRAL												
ARKANSAS	60	0.0	29,649.4	30,094.9	59,744.3	0.0	49.6	50.4	0.0	182.4	56.0	60
LOUISIANA	61	0.0	36,502.4	353,829.3	390,951.7	0.0	9.4	90.6	0.0	180.9	56.4	61
OKLAHOMA	62	0.0	3,074.0	305,080.6	308,154.6	0.0	1.0	99.0	0.0	179.0	53.3	62
TEXAS	63	99,917.0	31,751.4	1,541,561.3	1,473,209.7	6.8	2.2	91.1	21.9	190.4	69.9	63
..... TOTAL	65	99,917.0	100,957.2	2,030,566.1	2,231,440.5	4.5	4.5	91.0	21.9	184.5	64.9	65
MOUNTAIN												
ARIZONA	68	78,652.7	38,488.8	16,772.1	133,913.6	58.7	28.7	12.5	17.8	201.7	70.1	68
COLORADO	69	108,185.4	6,487.6	49,465.8	164,136.8	65.9	4.0	30.1	45.9	197.3	56.8	69
IDAHO	70	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	70
MONTANA	71	16,616.0	0.0	703.8	17,319.8	95.9	0.0	4.1	29.2	0.0	38.1	71
NEVADA	72	97,011.4	8,200.2	29,485.8	134,697.3	72.0	6.1	21.9	32.0	195.9	95.6	72
NEW MEXICO	75	131,069.1	10,730.3	63,604.5	205,403.9	65.8	5.2	31.0	21.9	213.8	63.1	75
UTAH	74	41,055.0	1,489.2	2,674.0	45,196.2	90.8	3.5	5.9	45.8	196.9	56.7	74
WYOMING	75	114,959.0	64.7	2.5	115,026.1	99.9	0.1	0.0	23.2	255.5	110.8	75
..... TOTAL	77	587,526.5	65,460.7	162,706.4	815,693.7	72.0	8.0	19.9	29.6	202.4	67.6	77
PACIFIC												
CALIFORNIA	80	0.0	496,453.1	295,977.9	792,450.9	0.0	62.6	37.4	0.0	241.2	89.1	80
OREGON	81	0.0	875.7	786.5	1,660.2	0.0	52.6	47.4	0.0	216.5	108.4	81
WASHINGTON	82	68,040.0	0.0	0.0	68,040.0	100.0	0.0	0.0	51.4	0.0	0.0	82
..... TOTAL	84	68,040.0	497,328.8	296,764.4	862,131.2	7.9	57.7	34.4	51.4	241.2	89.2	84
UNITED STATES TOTAL	86	8,718,954.8	3,014,545.9	3,057,594.2	14,791,092.9	58.9	20.4	20.7	82.3	202.2	68.1	86

SOURCE: FPC NEWS, January 26, 1976, No.22092.

TABLE 20

CONSUMPTION OF FOSSIL FUELS FOR ELECTRIC GENERATION—TOTAL ELECTRIC UTILITY INDUSTRY*

BY YEARS AND KINDS OF FUEL

Year	Coal (Thousand Short Tons)	Fuel Oil (Thousand 42-Gallon Barrels)	Gas (Million Cubic Feet)	Total Fossil Fuel in Coal Equivalent** (Thousand Short Tons)	Net Generation by Fuels** (Kwhr in Millions)	Heat Rate† (Btu per Kwhr)	Lbs. of Coal per Kwhr
1974p.....	392 345	536 105	3 429 230	685 116	1 449 070	10 481	0.946
1973r.....	388 190	559 842	3 640 756	688 043	1 498 958	10 429	0.918
1972p.....	351 045	493 927	3 978 673	646 308	1 418 781	10 479	0.911
1971p.....	327 926	396 238	3 992 981	600 496	1 308 857	10 536	0.918
1970.....	320 818	335 504	3 931 996	573 152	1 261 474	10 508	0.909
1969.....	310 641	251 027	3 487 642	517 937	1 177 127	10 457	0.880
1968.....	297 779	188 642	3 147 909	475 475	1 093 614	10 371	0.870
1967.....	274 185	161 278	2 746 352	428 165	984 560	10 396	0.870
1966.....	266 477	140 949	2 609 949	409 854	943 552	10 399	0.869
1965.....	244 788	115 203	2 321 101	367 567	857 286	10 384	0.858
1964.....	225 425	101 141	2 322 896	344 083	803 222	10 407	0.857
1963.....	211 332	93 314	2 144 473	319 840	747 530	10 438	0.856
1962.....	193 238	85 768	1 965 974	292 501	681 533	10 493	0.858
1961.....	182 121	85 736	1 825 117	275 544	638 277	10 552	0.863
1960.....	176 634	85 340	1 724 762	266 064	607 142	10 701	0.876
1959.....	168 423	88 263	1 628 509	254 525	571 883	10 879	0.890
1958.....	155 724	77 668	1 372 853	228 136	504 497	11 090	0.904
1957.....	160 769	79 693	1 336 141	232 576	501 098	11 365	0.928
1956.....	158 279	72 711	1 239 311	233 733	478 487	11 456	0.935
1955.....	143 759	75 274	1 153 280	206 929	433 786	11 699	0.954
1954.....	118 385	66 745	1 165 498	180 367	364 354	12 180	0.990
1953.....	115 897	82 238	1 034 272	178 491	337 041	12 889	1.059
1952.....	107 071	67 218	910 117	160 872	293 640	13 361	1.096
1951.....	105 768	63 945	763 898	154 498	270 532	13 641	1.142

*Alaska and Hawaii included since 1963.
** Excludes geothermal, wood, waste, and nuclear fuels. p Preliminary. r Revised.
† EEI estimate.
Source: Federal Power Commission.

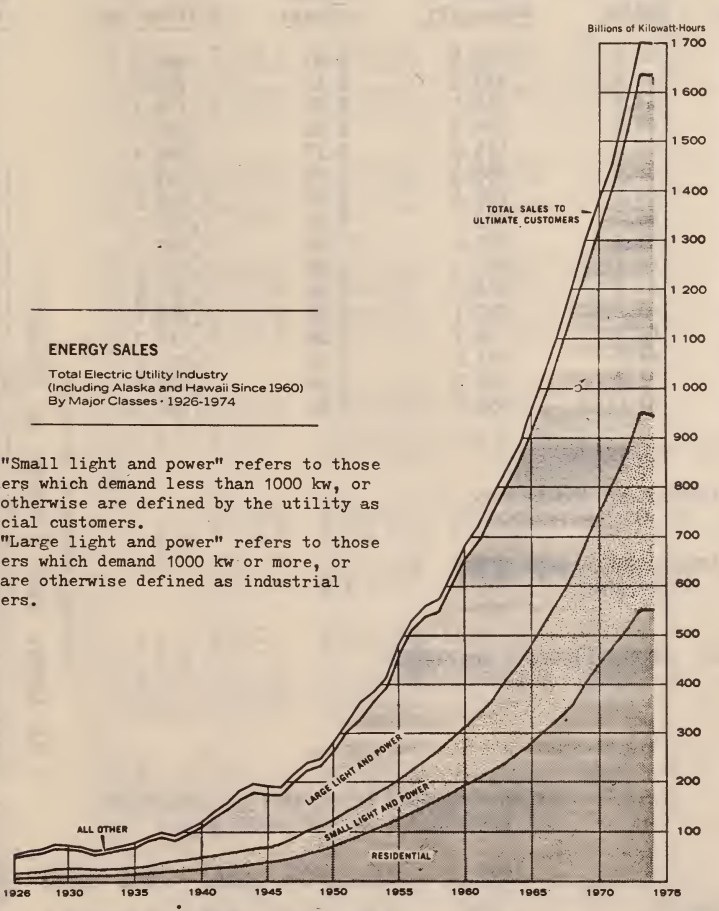
SOURCE: EEI, Statistical Year Book, 1974.

ELECTRICITY SALES, CUSTOMERS AND REVENUES

68-353 O - 76 - 4

FIGURE 2

ENERGY SALES



ENERGY SALES

Total Electric Utility Industry
(Including Alaska and Hawaii Since 1960)
By Major Classes · 1926-1974

NOTE: "Small light and power" refers to those customers which demand less than 1000 kw, or which otherwise are defined by the utility as commercial customers.

"Large light and power" refers to those customers which demand 1000 kw or more, or which are otherwise defined as industrial customers.

SOURCE: EEI, Statistical Year Book, 1974.

TABLE 21

HISTORICAL GROWTH: PEAK LOAD AND TOTAL ELECTRIC DEMAND

Year	Load Factor	Non-Coincident Summer Peak Load: Thousand Megawatts	Non-Coincident Summer Peak Load: Percent Increase	Delivered -- Total Electric Utility Industry: Billion kWh	Delivered -- Total Electric Utility Industry: Percent Increase
1960	65.5	132.8	5.99	683.2	9.02
1961	64.8	141.0	6.17	720.7	5.49
1962	64.9	149.1	5.71	776.1	7.69
1963	65.2	159.5	6.98	830.8	7.05
1964	64.2	175.0	9.75	890.4	7.17
1965	65.0	186.3	6.46	953.4	7.08
1966	64.7	203.4	9.15	1,039.0	8.98
1967	65.3	213.5	4.97	1,107.0	6.54
1968	63.5	238.0	11.50	1,202.3	8.61
1969	64.1	257.7	8.26	1,307.2	8.72
1970	63.9	274.7	6.60	1,391.4	6.44
1971	63.2	292.1	6.35	1,466.4	5.39
1972	62.5	319.2	9.26	1,577.7	7.59
1973	62.0	343.9	7.75	1,703.2	7.95
1974	61.2	349.3	1.56	1,700.8	(0.14)
1975	61.0E	356.2	2.00	1,734.0E	2.00E
E = estimated					
Compounded growth rate for the period:			7.6		7.2
Compounded growth rate, 1970-1974:			6.7		5.7

Source: Edison Electric Institute

TABLE 22

PERCENT INCREASE (DECREASE) IN DEMAND FOR ELECTRICITY BY CONSUMING SECTOR

	1964-69	1970	1971	1972	1973	1974	1975
Residential	9.3	9.8	7.0	6.8	8.4	0.1	6.2
Small Light & Power	9.3	9.1	6.7	8.4	9.7	(1.1)	7.0
Large Light & Power	6.4	2.8	3.5	7.9	7.5	0.3	(4.7)
Total Consumption	8.0	6.4	5.4	7.6	8.0	(0.1)	2.0

Source: Edison Electric Institute (derived)

FEA, National Energy Outlook, 1976.

TABLE 23

ENERGY SALES—TOTAL ELECTRIC UTILITY INDUSTRY*

BY YEARS AND CLASSES OF SERVICE

KILOWATT-HOURS IN MILLIONS

Year	Total Sales	Exports to Canada and Mexico	Total Sales to Ultimate Customers	Commercial and Industrial		Street and Highway Lighting	Other Public Authorities	Railroads and Railways	Interdepartmental
				Residential	Small Light and Power**	Large Light and Power**				
1974	1 703 652p	2 883p	1 700 769	554 960	392 716	689 435	13 313	40 721	4 258	5 366
1973	1 705 773r	2 570r	1 703 203	554 171	396 903	687 235	12 836	42 340	4 186	5 532
1972	1 580 466	2 752	1 577 714	511 423	361 859	639 467	12 193	43 190	4 440	5 142
1971	1 469 955	3 514	1 466 441	479 080	333 752	592 700	11 673	39 819	4 537	4 880
1970	1 395 568	4 209	1 391 359	447 795	312 750	572 522	11 183	37 816	4 633	4 660
1969	1 311 008	3 830	1 307 178	407 922	286 686	557 220	10 772	35 861	4 531	4 186
1968	1 206 606	4 285	1 202 321	367 692	265 151	518 834	10 302	32 162	4 540	3 640
1967	1 111 373	4 350	1 107 023	331 525	242 492	486 043	9 863	29 426	4 572	3 102
1966	1 042 158	3 176	1 038 982	306 572	225 878	465 077	9 240	25 922	4 514	1 779
1965	957 113	3 699	953 414	280 970	202 112	433 365	8 782	21 675	4 652	1 858
1964	894 609	4 253	890 356	262 010	183 539	409 356	8 290	20 651	4 721	1 789
1963	832 796	1 985	830 811	241 692	166 516	388 399	7 748	20 194	4 667	1 595
1962	777 749	1 661	776 088	226 414	144 095	373 916	7 350	18 349	4 717	1 247
1961	721 645	917	720 728	209 021	134 864	347 427	6 762	16 438	4 685	1 531
1960	683 987	788	683 199	196 400	114 806	344 799	6 121	15 642	4 770	661
1959	627 529	786	626 743	180 186	109 079	312 618	5 870	14 211	4 132	647

* Alaska and Hawaii included since 1960.

** Small Light and Power and Large Light and Power are not wholly comparable on a year-to-year basis due to changes from one classification to another.

p Preliminary. r Revised.

SOURCE: EEI, Statistical Year Book, 1974.

TABLE 24

ENERGY SALES IN PERCENT OF TOTAL—TOTAL ELECTRIC UTILITY INDUSTRY

BY YEARS AND CLASSES OF SERVICE

Year	Residential	Commercial and Industrial		Other Public Authorities	Railroads and Railways	All Other*
		Small Light and Power	Large Light and Power			
1974	32.6%	23.1%	40.5%	2.4%	0.3%	1.1%
1973	32.5	23.3	40.4	2.5	0.2	1.1
1972	32.4	23.0	40.5	2.7	0.3	1.1
1971	32.7	22.8	40.4	2.7	0.3	1.1
1970	32.2	22.5	41.2	2.7	0.3	1.1
1969	31.2	21.9	42.6	2.7	0.4	1.2
1968	30.6	22.1	43.1	2.7	0.4	1.1
1967	29.9	21.9	43.9	2.7	0.4	1.2
1966	29.5	21.7	44.8	2.5	0.4	1.1
1965	29.5	21.2	45.4	2.3	0.5	1.1
1964	29.4	20.6	46.0	2.3	0.5	1.2
1963	29.1	20.0	46.8	2.4	0.6	1.1
1962	29.2	18.6	48.2	2.3	0.6	1.1
1961	29.0	18.7	48.2	2.3	0.7	1.1
1960	28.7	16.8	50.5	2.3	0.7	1.0
1959	28.7	17.4	49.9	2.3	0.7	1.0

* Includes "Street and Highway Lighting" and "Interdepartmental."

SOURCE: EEI, Statistical Year Book, 1974.

TABLE 25

ENERGY SALES—TOTAL ELECTRIC UTILITY INDUSTRY

BY STATES AND CLASSES OF SERVICE

YEAR 1974—KILOWATT-HOURS IN MILLIONS

	Total to Ultimate Customers	Residential	Commercial and Industrial		Street and Highway Lighting	Other Public Authorities	Railroads and Railways	Inter-departmental
			Small Light and Power	Large Light and Power				
Total United States	1 700 769	554 960	392 716	689 435	13 313	40 721	4 258	5 366
Maine	6 232	2 405	1 287	2 317	60	163	—	—
New Hampshire	4 860	2 112	813	1 867	36	32	—	—
Vermont	3 095	1 486	553	884	19	140	—	13
Massachusetts	29 356	10 974	9 420	8 176	315	261	26	184
Rhode Island	4 551	1 642	1 359	1 421	59	70	—	—
Connecticut	18 800	7 475	5 472	5 611	217	19	—	6
New England	*66 894*	*26 094*	*18 904*	*20 276*	*706*	*685*	*26*	*203*
New York	95 814	27 899	29 033	29 725	1 224	5 409	2 487	37
New Jersey	43 995	14 248	12 904	16 391	398	16	6	32
Pennsylvania	89 621	26 673	16 338	44 786	517	347	916	74
Middle Atlantic	*229 430*	*68 820*	*58 276*	*90 902*	*2 139*	*5 742*	*3 409*	*143*
Ohio	105 703	26 717	18 178	57 559	654	2 517	39	39
Indiana	46 823	14 661	7 972	23 642	329	157	17	45
Illinois	82 485	24 055	20 567	32 289	747	4 490	320	17
Michigan	63 669	20 218	12 648	29 036	584	1 115	—	68
Wisconsin	30 288	11 298	6 867	11 227	458	369	—	69
East North Central	*328 968*	*96 949*	*66 232*	*153 753*	*2 772*	*8 648*	*376*	*238*
Minnesota	25 276	9 396	4 150	10 969	219	489	—	53
Iowa	19 076	7 635	4 208	6 716	212	276	—	29
Missouri	30 837	11 706	6 917	11 242	297	630	12	33
North Dakota	3 365	1 661	1 033	490	44	132	—	5
South Dakota	3 488	1 847	965	451	38	176	—	11
Nebraska	10 654	4 255	3 542	2 296	125	384	7	45
Kansas	16 974	5 839	5 165	5 581	157	180	—	52
West North Central	*109 670*	*42 839*	*25 980*	*37 745*	*1 092*	*2 267*	*19*	*228*
Delaware	5 450	1 412	1 122	2 870	30	7	—	9
Maryland and D.C.	32 537	10 020	9 900	12 041	299	22	203	52
Virginia	37 025	14 559	9 514	9 007	193	3 667	—	55
West Virginia	17 216	4 542	2 643	9 950	54	26	—	1
North Carolina	49 746	18 250	10 444	19 676	216	972	—	188
South Carolina	29 128	9 073	5 305	14 010	84	646	—	10
Georgia	40 554	15 471	10 625	14 093	248	104	—	13
Florida	67 434	33 329	18 918	13 370	481	1 281	—	55
South Atlantic	*279 090*	*106 656*	*68 601*	*95 017*	*1 605*	*6 725*	*203*	*383*
Kentucky	43 526	9 433	7 540	25 192	182	1 148	—	31
Tennessee	64 917	21 693	3 618	38 945	610	16	—	35
Alabama	42 273	13 121	5 747	23 044	227	27	—	107
Mississippi	18 530	7 363	4 034	6 698	151	278	—	6
East South Central	*169 246*	*51 610*	*20 939*	*93 879*	*1 170*	*1 469*	—	*179*
Arkansas	16 630	5 725	3 389	7 063	89	339	16	9
Louisiana	38 583	11 649	6 845	17 360	244	983	—	1 502
Oklahoma	21 454	8 016	5 729	6 463	133	1 101	—	12
Texas	124 068	37 849	30 108	52 448	737	2 779	—	147
West South Central	*200 735*	*63 239*	*46 071*	*83 334*	*1 203*	*5 202*	*16*	*1 670*
Montana	9 540	1 877	1 488	5 963	57	113	23	19
Idaho	12 431	3 393	3 218	5 556	39	210	—	15
Wyoming	4 145	785	1 443	1 835	18	54	—	10
Colorado	14 637	4 749	5 864	3 109	129	712	—	74
New Mexico	6 372	1 795	2 552	1 547	49	398	—	31
Arizona	19 732	6 651	6 300	5 788	113	611	—	239
Utah	7 122	2 420	2 054	2 187	56	397	—	8
Nevada	7 691	2 794	2 524	2 108	59	133	—	73
Mountain	*81 670*	*24 464*	*25 443*	*28 093*	*520*	*2 658*	*23*	*469*
Washington	57 612	19 417	9 256	27 243	208	934	11	453
Oregon	31 592	11 565	6 760	12 959	174	104	—	30
California	139 039	41 408	44 739	43 646	1 549	6 157	174	1 366
Pacific	*228 243*	*72 390*	*60 755*	*83 848*	*2 021*	*7 195*	*185*	*1 849*
Alaska	1 713	765	644	153	16	130	1	4
Hawaii	5 110	1 634	972	2 435	69	—	—	—
Alaska & Hawaii	*6 823*	*2 399*	*1 616*	*2 588*	*85*	*130*	*1*	*4*

SOURCE: EEI, Statistical Year Book, 1974.

TABLE 26

ULTIMATE CUSTOMERS—TOTAL ELECTRIC UTILITY INDUSTRY*

BY YEARS AND CLASSES OF SERVICE AT DECEMBER 31st

Year	Total Ultimate Customers	Residential	Commercial and Industrial		Street and Highway Lighting	Other Public Authorities	Railroads and Railways	Inter-departmental
			Small Light and Power**	Large Light and Power**				
1974	80 102 390	70 949 607	8 472 817	422 736	112 477	139 480	29	5 244
1973	78 461 251	69 438 429	8 361 817	413 383	108 787	133 619	46	5 140
1972	76 150 204	67 314 000	8 200 033	369 952	103 874	157 461	50	4 834
1971	74 265 071	65 650 046	8 002 572	355 967	96 252	155 414	48	4 772
1970	72 484 978	64 017 662	7 865 073	352 993	92 052	152 706	47	4 445
1969	70 929 138	62 598 910	7 744 851	348 648	86 678	145 071	49	4 931
1968	69 716 013	61 439 030	7 706 779	333 650	86 023	146 257	64	4 210
1967	68 167 525	60 033 404	7 579 626	324 222	82 445	143 870	65	3 893
1966	66 909 793	58 826 283	7 536 066	316 098	85 197	141 703	65	4 381
1965	65 557 520	57 596 016	7 419 956	309 615	84 925	141 532	66	5 410
1964	64 148 656	56 307 195	7 293 997	318 168	83 729	139 549	83	5 935
1963	62 857 451	55 073 055	7 232 065	320 732	79 816	145 184	117	6 482
1962	61 323 917	53 649 362	6 980 960	441 394	79 363	167 053	118	5 667
1961	60 130 180	52 569 050	6 843 592	515 389	63 459	135 653	94	2 943
1960	58 869 766	51 446 472	6 759 902	453 582	53 515	154 630	73	1 562
1959	57 504 761	50 403 378	6 462 452	443 382	48 874	145 335	70	1 270

* Alaska and Hawaii included since 1960.

** Small Light and Power and Large Light and Power are not wholly comparable on a year-to-year basis due to changes from one classification to another.

SOURCE: EEI, Statistical Year Book, 1974.

TABLE 27

ULTIMATE CUSTOMERS—TOTAL ELECTRIC UTILITY INDUSTRY

BY STATES AND CLASSES OF SERVICE AT DECEMBER 31, 1974

	Total Ultimate Customers	Residential	Commercial and Industrial		Street and Highway Lighting	Other Public Authorities	Railroads and Railways	Inter-departmental
			Small Light and Power	Large Light and Power				
Total United States	**80 102 390**	**70 949 607**	**8 472 817**	**422 736**	**112 477**	**139 480**	**29**	**5 244**
Maine	462 810	405 411	52 468	1 248	3 493	185	—	2
New Hampshire	354 407	311 249	40 270	1 356	1 017	515	—	—
Vermont	210 443	185 213	21 915	828	314	2 133	—	10
Massachusetts	2 069 830	1 857 707	197 295	9 243	1 525	2 983	1	1 076
Rhode Island	346 365	309 514	34 236	2 109	492	13	—	1
Connecticut	1 143 720	1 031 575	103 777	5 409	2 718	215	—	26
New England	*4 587 575*	*4 100 702*	*449 961*	*20 193*	*9 559*	*6 044*	*1*	*1 115*
New York	6 311 097	5 582 091	663 732	43 197	6 104	15 932	7	34
New Jersey	2 669 207	2 357 908	292 829	12 344	6 031	91	1	3
Pennsylvania	4 337 059	3 870 631	426 682	30 302	6 004	3 422	4	14
Middle Atlantic	*13 317 363*	*11 810 630*	*1 383 243*	*85 843*	*18 139*	*19 445*	*12*	*51*
Ohio	3 984 469	3 590 920	357 976	20 983	5 322	9 192	2	74
Indiana	1 995 840	1 782 588	191 838	15 538	1 889	955	1	31
Illinois	4 134 142	3 746 105	369 044	6 721	2 577	9 668	2	22
Michigan	3 396 795	3 091 696	290 121	11 699	1 807	1 431	—	41
Wisconsin	1 754 272	1 570 414	175 970	3 276	3 250	1 227	—	135
East North Central	*15 265 518*	*13 781 723*	*1 387 949*	*58 220*	*14 845*	*22 473*	*6*	*303*
Minnesota	1 456 804	1 309 395	134 961	5 588	3 287	3 498	—	72
Iowa	1 147 192	1 001 115	137 628	3 412	929	4 066	1	41
Missouri	1 911 387	1 697 801	200 288	8 226	1 084	3 805	1	182
North Dakota	240 076	205 201	32 833	986	535	513	—	8
South Dakota	264 875	228 886	34 676	602	304	389	—	18
Nebraska	621 294	526 360	89 274	1 363	475	3 761	1	60
Kansas	934 039	813 404	112 002	6 587	1 029	972	—	45
West North Central	*6 575 667*	*5 782 162*	*741 665*	*26 764*	*7 643*	*17 004*	*3*	*426*
Delaware	212 128	190 157	20 753	714	142	58	—	4
Maryland and D.C.	1 541 275	1 355 736	151 512	3 192	740	85	2	8
Virginia	1 707 707	1 533 070	156 703	3 325	1 175	13 421	—	10
West Virginia	707 276	628 182	71 432	6 414	834	413	—	1
North Carolina	2 119 049	1 819 388	251 925	10 758	4 363	2 236	—	379
South Carolina	1 051 441	923 749	124 181	3 129	1 859	1 491	—	29
Georgia	1 852 923	1 650 671	191 914	5 077	1 397	832	—	32
Florida	3 554 658	3 174 664	351 869	22 377	3 082	2 599	—	67
South Atlantic	*12 719 457*	*11 305 917*	*1 323 289*	*54 986*	*13 592*	*21 141*	*2*	*530*
Kentucky	1 273 511	1 130 668	126 998	7 086	2 956	5 810	—	23
Tennessee	1 670 918	1 493 330	159 713	16 091	1 734	60	—	20
Alabama	1 438 770	1 267 817	163 282	6 518	978	152	—	23
Mississippi	877 968	767 481	101 909	6 033	739	1 795	—	11
East South Central	*5 261 227*	*4 659 296*	*551 902*	*35 728*	*6 407*	*7 817*	—	*77*
Arkansas	844 225	740 440	89 389	11 614	499	2 273	1	9
Louisiana	1 386 931	1 231 514	134 362	13 446	1 339	6 229	—	41
Oklahoma	1 149 654	1 007 410	126 119	9 075	1 126	5 900	—	24
Texas	4 365 618	3 756 738	546 171	42 272	2 306	17 941	—	190
West South Central	*7 746 428*	*6 736 102*	*896 041*	*76 407*	*5 270*	*32 343*	*1*	*264*
Montana	305 953	260 587	41 513	2 546	884	144	—	279
Idaho	327 870	282 527	43 235	1 719	339	38	—	12
Wyoming	161 418	133 184	25 933	2 018	123	146	—	14
Colorado	1 025 050	894 818	118 687	9 419	460	1 529	—	107
New Mexico	397 487	336 691	56 609	3 237	87	787	—	76
Arizona	800 373	701 333	89 483	3 936	1 397	1 084	—	140
Utah	391 977	351 526	36 216	5 910	1 011	231	—	17
Nevada	233 266	201 869	31 098	100	146	51	—	2
Mountain	*3 646 394*	*3 165 535*	*442 804*	*28 945*	*4 450*	*4 013*	—	*647*
Washington	1 436 487	1 274 741	150 770	4 142	3 491	3 321	1	21
Oregon	943 237	824 492	115 055	1 369	1 038	1 178	—	105
California	8 251 259	7 205 428	984 613	28 823	26 367	4 334	3	1 691
Pacific	*10 630 983*	*9 304 661*	*1 250 438*	*34 334*	*30 896*	*8 833*	*4*	*1 817*
Alaska	96 564	83 805	12 176	148	53	367	1	14
Hawaii	255 214	219 074	33 349	1 168	1 623	—	—	—
Alaska & Hawaii	*351 778*	*302 879*	*45 525*	*1 316*	*1 676*	*367*	*1*	*14*

SOURCE: EEI, Statistical Year Book, 1974.

TABLE 28

AVERAGE NUMBER OF CUSTOMERS—TOTAL ELECTRIC UTILITY INDUSTRY

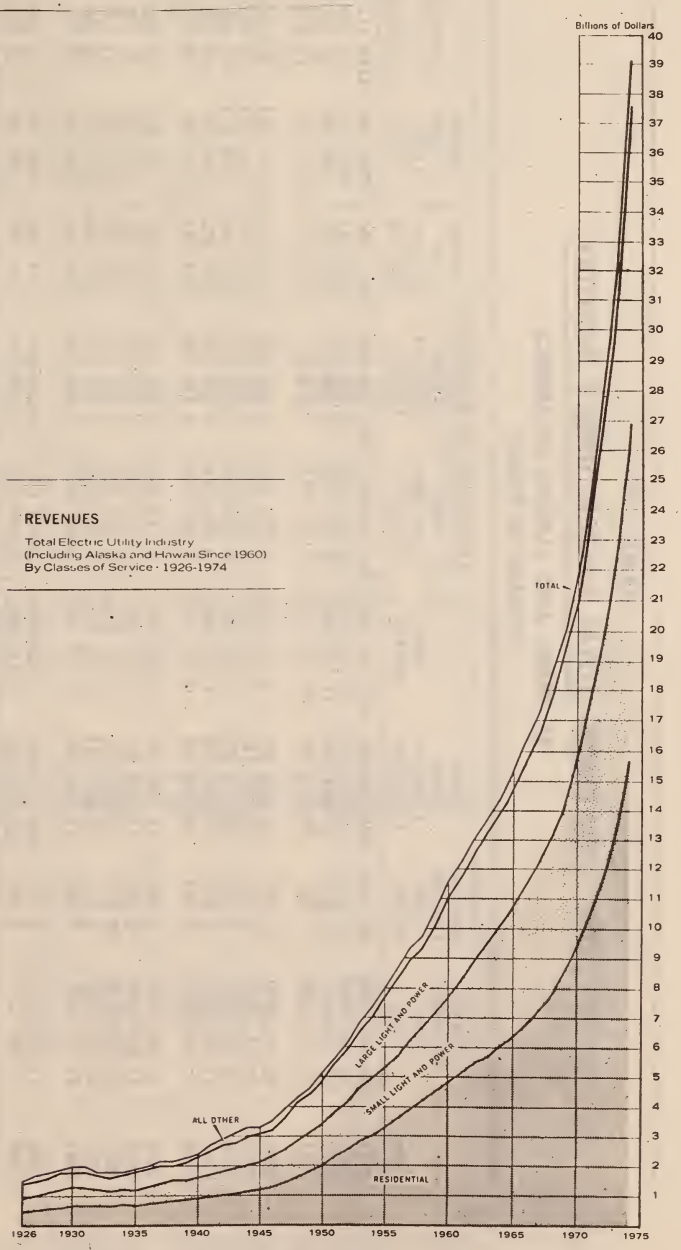
BY STATES AND CERTAIN CLASSES OF SERVICE—YEAR 1974

	Total Ultimate Customers	Residential	Commercial (Small Light and Power)
Total United States	**79 295 937**	**70 185 133**	**8 435 244**
Maine	466 853	408 769	53 193
New Hampshire	351 820	308 881	40 010
Vermont	208 728	183 823	21 630
Massachusetts	2 074 617	1 862 062	197 668
Rhode Island	345 585	308 648	34 321
Connecticut	1 136 903	1 021 985	103 567
New England	*4 584 506*	*4 097 168*	*450 419*
New York	6 295 410	5 566 094	664 462
New Jersey	2 662 361	2 350 461	293 190
Pennsylvania	4 309 236	3 813 162	426 398
Middle Atlantic	*13 267 010*	*11 759 717*	*1 384 050*
Ohio	3 953 315	3 562 010	356 230
Indiana	1 976 022	1 761 638	192 819
Illinois	4 107 061	3 720 178	368 124
Michigan	3 364 757	3 062 127	287 728
Wisconsin	1 736 197	1 553 254	171 592
East North Central	*15 137 352*	*13 662 207*	*1 376 493*
Minnesota	1 439 884	1 293 675	133 890
Iowa	1 137 534	991 730	137 390
Missouri	1 896 106	1 682 945	199 921
North Dakota	237 102	202 488	32 675
South Dakota	262 588	226 438	34 873
Nebraska	612 829	518 976	88 371
Kansas	925 315	805 994	110 831
West North Central	*6 511 358*	*5 722 246*	*737 951*
Delaware	211 183	189 494	20 784
Maryland and D.C.	1 494 307	1 340 126	150 196
Virginia	1 680 993	1 508 614	155 095
West Virginia	698 275	619 820	70 984
North Carolina	2 093 928	1 826 196	250 869
South Carolina	1 041 406	910 494	124 474
Georgia	1 825 210	1 624 311	193 743
Florida	3 460 109	3 086 477	348 221
South Atlantic	*12 505 411*	*11 105 532*	*1 314 366*
Kentucky	1 255 939	1 114 807	125 515
Tennessee	1 646 868	1 470 266	158 865
Alabama	1 427 424	1 256 853	163 002
Mississippi	865 711	756 027	101 306
East South Central	*5 195 942*	*4 597 953*	*548 718*
Arkansas	833 575	729 528	89 263
Louisiana	1 373 496	1 219 152	133 221
Oklahoma	1 135 521	994 839	125 158
Texas	4 318 567	3 713 020	543 315
West South Central	*7 661 159*	*6 656 539*	*890 957*
Montana	301 994	256 586	40 913
Idaho	324 563	275 982	45 656
Wyoming	156 955	129 873	25 050
Colorado	1 000 788	871 905	117 427
New Mexico	392 278	331 524	56 612
Arizona	777 839	683 802	87 459
Utah	388 108	345 176	35 497
Nevada	229 642	198 177	31 172
Mountain	*3 572 167*	*3 093 025*	*439 786*
Washington	1 424 605	1 262 824	150 804
Oregon	931 942	811 824	116 524
California	8 158 330	7 118 212	980 199
Pacific	*10 514 877*	*9 192 860*	*1 247 527*
Alaska	94 480	82 051	11 818
Hawaii	251 675	215 835	33 129
Alaska & Hawaii	*346 155*	*297 886*	*44 977*

SOURCE: EEI, Statistical Year Book, 1974.

FIGURE 3

REVENUES



SOURCE: EEI, Statistical Year Book, 1974.

TABLE 29

REVENUES—TOTAL ELECTRIC UTILITY INDUSTRY*

BY YEARS AND CLASSES OF SERVICE

THOUSANDS OF DOLLARS

Year	Total Revenue from Sales†	From Exports to Canada and Mexico	Total from Ultimate Customers	Residential	Commercial and Industrial		Street and Highway Lighting	Other Public Authorities	Railroads and Railways	Interdepartmental
					Small Light and Power**	Large Light and Power**				
1974	$39 132 888p	$6 083p	$39 126 805	$15 702 853	$11 196 960	$10 673 464	$573 164	$780 010	$146 112	$54 242
1973	31 668 281r	5 422r	31 662 859	13 194 773	9 147 188	8 073 636	491 831	620 991	91 903	42 537
1972	27 927 681	6 611	27 921 070	11 729 833	8 041 052	6 983 891	449 831	593 267	85 300	37 896
1971	24 735 122	9 963	24 725 159	10 483 526	7 071 971	6 133 964	411 534	512 772	77 862	33 530
1970	22 076 885	11 023	22 065 862	9 415 707	6 290 225	5 429 852	377 791	453 104	69 169	30 014
1969	20 144 225	4 876	20 139 349	8 532 729	5 704 764	5 044 857	350 563	417 571	62 981	25 884
1968	18 585 368	5 489	18 579 879	7 802 033	5 315 100	4 672 211	327 196	379 435	61 440	22 464
1967	17 226 235	3 515	17 222 720	7 183 908	4 935 911	4 364 759	307 272	349 323	60 609	20 938
1966	16 199 140	3 004	16 196 136	6 733 714	4 649 084	4 134 538	281 584	321 001	59 132	17 083
1965	15 162 538	4 159	15 158 379	6 328 756	4 312 859	3 884 748	262 569	290 892	60 903	17 652
1964	14 413 138	4 680	14 408 458	6 010 681	4 028 198	3 733 369	248 225	278 319	61 702	17 964
1963	13 708 178	10 972	13 697 206	5 722 544	3 788 316	3 596 121	236 448	275 030	61 749	16 998
1962	13 033 989	9 045	13 024 944	5 457 614	3 420 013	3 591 097	223 445	255 815	63 255	13 705
1961	12 177 388	8 085	12 169 303	5 115 799	3 168 055	3 369 749	205 411	232 319	62 872	15 098
1960	11 523 571	7 915	11 515 656	4 855 799	2 828 186	3 333 896	194 643	232 868	62 640	7 624
1959	10 580 277	7 625	10 572 652	4 514 707	2 598 452	3 009 686	180 694	209 380	52 912	6 821

† Excludes other electric revenues.
* Alaska and Hawaii included since 1960.
** Small Light and Power and Large Light and Power are not wholly comparable on a year-to-year basis due to changes from one classification to another.
p Preliminary. r Revised.

SOURCE: EEI, Statistical Year Book, 1974.

TABLE 30

REVENUES IN PERCENT OF TOTAL—TOTAL ELECTRIC UTILITY INDUSTRY

BY YEARS AND CLASSES OF SERVICE

Year	Residential	Commercial and Industrial Small Light and Power	Commercial and Industrial Large Light and Power	Other Public Authorities	Railroads and Railways	All Other*
1974	40.1%	28.6%	27.3%	2.0%	0.4%	1.6%
1973	41.6	28.9	25.5	2.0	0.3	1.7
1972	42.0	28.8	25.0	2.1	0.3	1.8
1971	42.4	28.6	24.8	2.1	0.3	1.8
1970	42.7	28.5	24.6	2.1	0.3	1.8
1969	42.4	28.3	25.0	2.1	0.3	1.9
1968	42.0	28.6	25.2	2.0	0.3	1.9
1967	41.7	28.7	25.3	2.0	0.4	1.9
1966	41.6	28.7	25.5	2.0	0.4	1.8
1965	41.8	28.5	25.6	1.9	0.4	1.8
1964	41.9	28.0	25.9	1.9	0.4	1.9
1963	41.8	27.7	26.2	2.0	0.5	1.8
1962	41.9	26.2	27.6	2.0	0.5	1.8
1961	42.0	26.1	27.7	1.9	0.5	1.8
1960	42.2	24.6	28.9	2.0	0.5	1.8
1959	42.7	24.6	28.4	2.0	0.5	1.8

* Includes "Street and Highway Lighting" and "Interdepartmental."

SOURCE: EEI, Statistical Year Book, 1974.

TABLE 31

REVENUES—TOTAL ELECTRIC UTILITY INDUSTRY

BY STATES AND CLASSES OF SERVICE

YEAR 1974—THOUSANDS OF DOLLARS

	Total from Ultimate Customers	Residential	Commercial and Industrial		Street and Highway Lighting	Other Public Authorities	Railroads and Railways	Inter-departmental
			Small Light and Power	Large Light and Power				
Total United States	$39 126 805	$15 702 853	$11 196 960	$10 673 464	$573 164	$780 010	$146 112	$54 242
Maine	167 350	75 107	30 512	43 121	1 396	3 661	-	11
New Hampshire	156 862	77 211	31 755	44 038	2 773	1 085	-	-
Vermont	89 110	45 740	18 261	19 917	1 235	3 837	-	120
Massachusetts	1 158 411	476 691	388 643	255 558	23 129	8 991	1 155	4 241
Rhode Island	182 033	74 744	54 556	46 640	3 623	2 465	-	5
Connecticut	686 146	302 127	208 351	160 190	11 758	593	-	124
New England	*2 439 912*	*1 051 920*	*742 081*	*569 764*	*49 914*	*20 577*	*1 155*	*4 501*
New York	3 751 188	1 301 456	1 410 262	628 832	71 738	232 862	105 242	796
New Jersey	1 667 181	629 397	542 060	462 088	31 696	568	175	1 197
Pennsylvania	2 474 762	941 108	520 521	942 239	34 165	11 748	23 443	1 538
Middle Atlantic	*7 893 131*	*2 871 961*	*2 472 843*	*2 033 159*	*137 599*	*245 178*	*128 860*	*3 531*
Ohio	2 196 253	776 485	503 296	834 101	29 258	51 556	941	616
Indiana	904 005	356 366	193 221	337 177	13 263	2 954	439	585
Illinois	2 044 729	780 899	620 123	528 018	20 325	88 723	6 291	347
Michigan	1 586 348	599 633	379 628	552 960	31 417	21 245	—	1 455
Wisconsin	721 713	308 401	197 629	192 191	15 176	6 807	—	1 209
East North Central	*7 453 048*	*2 821 794*	*1 893 897*	*2 444 747*	*109 439*	*171 285*	*7 674*	*4 212*
Minnesota	596 290	261 555	126 429	190 779	8 559	8 291	—	677
Iowa	460 848	219 739	121 328	105 692	7 754	5 874	3	458
Missouri	734 822	334 190	188 692	190 984	9 915	10 286	166	589
North Dakota	82 343	43 839	24 775	10 701	1 372	1 590	—	66
South Dakota	86 752	48 505	27 422	7 885	1 420	1 338	—	182
Nebraska	202 760	95 674	68 472	30 258	2 880	4 903	76	497
Kansas	341 402	144 373	113 736	74 919	4 882	2 730	—	762
West North Central	*2 505 217*	*1 147 875*	*670 854*	*611 218*	*36 782*	*35 012*	*245*	*3 231*
Delaware	171 758	57 633	41 664	73 406	1 550	216	—	289
Maryland and D.C.	1 023 041	359 139	355 077	281 227	21 208	623	5 201	566
Virginia	887 676	419 749	260 306	164 320	7 516	44 147	—	638
West Virginia	316 111	123 686	67 902	151 665	2 293	555	—	10
North Carolina	1 024 057	456 580	239 047	301 843	7 730	16 351	—	2 546
South Carolina	509 903	234 560	125 473	127 317	3 218	9 121	—	214
Georgia	878 498	356 146	285 053	226 579	8 368	2 124	—	228
Florida	1 827 617	947 084	578 263	252 551	19 841	28 539	—	1 339
South Atlantic	*6 731 661*	*2 945 577*	*1 952 755*	*1 648 898*	*71 724*	*101 676*	*5 201*	*5 830*
Kentucky	598 812	203 707	107 114	262 307	5 017	19 363	—	404
Tennessee	826 941	339 468	71 330	397 375	18 060	310	—	398
Alabama	702 780	274 060	138 657	281 035	7 491	436	—	1 191
Mississippi	393 829	170 120	102 800	109 751	4 963	6 090	—	102
East South Central	*2 522 362*	*987 355*	*419 901*	*1 050 471*	*36 841*	*26 199*	—	*2 095*
Arkansas	356 252	150 850	85 902	110 010	2 639	6 409	345	97
Louisiana	703 550	286 735	163 575	216 663	7 116	17 529	2	11 930
Oklahoma	396 699	191 003	115 213	72 419	2 913	14 956	—	195
Texas	2 203 248	910 919	624 669	606 477	17 265	41 988	—	1 930
West South Central	*3 659 749*	*1 539 507*	*989 359*	*1 005 569*	*29 933*	*80 882*	*347*	*14 152*
Montana	105 137	41 853	30 435	29 965	1 841	655	121	267
Idaho	138 716	53 157	45 230	38 353	1 275	593	—	108
Wyoming	64 011	18 677	21 389	19 636	688	527	—	94
Colorado	321 737	130 734	131 443	44 153	5 490	9 363	—	554
New Mexico	141 042	52 141	57 372	22 341	1 681	7 006	—	498
Arizona	473 304	192 646	157 694	102 039	4 591	13 170	—	3 164
Utah	134 193	55 536	41 499	30 783	2 286	3 924	—	165
Nevada	137 245	52 506	53 127	28 259	1 571	1 544	—	238
Mountain	*1 515 385*	*597 253*	*541 189*	*315 529*	*19 423*	*36 782*	*121*	*5 088*
Washington	437 186	216 652	116 364	90 600	5 253	7 900	105	312
Oregon	339 049	168 085	100 650	64 077	5 128	857	—	252
California	3 429 546	1 275 025	1 235 954	785 868	68 680	50 733	2 329	10 957
Pacific	*4 205 781*	*1 659 762*	*1 452 968*	*940 545*	*79 061*	*59 490*	*2 434*	*11 521*
Alaska	51 338	23 406	21 019	3 107	721	2 929	75	81
Hawaii	149 221	56 443	40 094	50 457	2 227	-	-	-
Alaska & Hawaii	*200 559*	*79 849*	*61 114*	*53 564*	*2 948*	*2 929*	*76*	*81*

SOURCE: EEI, Statistical Year Book, 1974.

TABLE 32

AVERAGE REVENUES PER KILOWATT-HOUR SOLD—TOTAL ELECTRIC UTILITY INDUSTRY

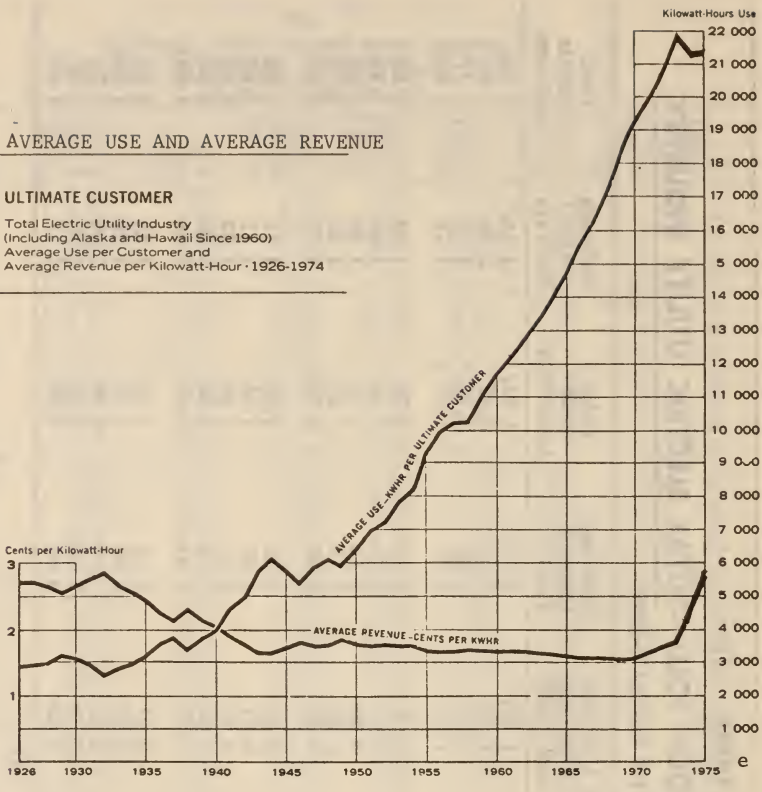
CENTS PER KILOWATT-HOUR

Year	Residential	Commercial and Industrial		Street and Highway Lighting	Other Public Authorities	Railroads and Railways	Total Ultimate Customers
		Small Light and Power	Large Light and Power				
1974	2.83¢	2.85¢	1.55¢	4.31¢	1.92¢	3.43¢	2.30¢
1973	2.38	2.30	1.17	3.83	1.47	2.20	1.86
1972	2.29	2.22	1.09	3.69	1.37	1.92	1.77
1971	2.19	2.12	1.03	3.53	1.29	1.72	1.69
1970	2.10	2.01	0.95	3.38	1.20	1.49	1.59
1969	2.09	1.99	0.91	3.25	1.16	1.39	1.54
1968	2.12	2.00	0.90	3.18	1.18	1.35	1.55
1967	2.17	2.04	0.90	3.12	1.19	1.33	1.56
1966	2.20	2.06	0.89	3.05	1.24	1.31	1.56
1965	2.25	2.13	0.90	2.99	1.34	1.31	1.59
1964	2.31	2.19	0.91	2.99	1.35	1.31	1.62
1963	2.37	2.28	0.93	3.05	1.36	1.32	1.65
1962	2.41	2.37	0.96	3.04	1.39	1.34	1.68
1961	2.45	2.35	0.97	3.04	1.41	1.34	1.69
1960	2.47	2.46	0.97	3.18	1.49	1.31	1.69
1959	2.51	2.38	0.96	3.08	1.47	1.28	1.69
1958	2.54	2.43	0.97	3.08	1.49	1.25	1.71
1957	2.56	2.44	0.94	3.05	1.47	1.22	1.67
1956	2.61	2.47	0.92	3.05	1.42	1.17	1.64

Source: EEI, Statistical Year Book, 1974.

FIGURE 3-A

AVERAGE USE AND AVERAGE REVENUE



SOURCE: EEI, Statistical Year Book, 1974.

TABLE 33

AVERAGE USE AND BILL PER CUSTOMER—TOTAL ELECTRIC UTILITY INDUSTRY

AVERAGE KILOWATT-HOURS USED PER CUSTOMER				AVERAGE ANNUAL BILL PER CUSTOMER			
Year	Residential	Commercial (Small Light and Power)	Total Ultimate Customers	Year	Residential	Commercial (Small Light and Power)	Total Ultimate Customers
1974	**7 907**	**46 557**	**21 448**	**1974**	**$223.77**	**$1 327**	**$493.30**
1973	8 079	47 580	21 955	1973	192.28	1 094	408.36
1972	7 691	44 496	20 964	1972	176.12	988	371.06
1971	7 380	41 943	19 956	1971	161.62	889	337.26
1970	7 066	39 952	19 380	1970	148.39	803	308.14
1969	6 571	36 950	18 563	1969	137.33	735	285.87
1968	6 057	34 637	17 445	1968	128.41	693	270.40
1967	5 577	32 041	16 384	1967	121.02	654	255.59
1966	5 265	30 133	15 678	1966	115.83	621	244.58
1965	4 933	27 399	14 694	1965	110.99	584	233.63
1964	4 703	25 213	14 015	1964	108.64	552	227.04
1963	4 442	23 224	13 366	1963	105.28	530	220.54
1962	4 259	20 733	12 763	1962	102.64	491	214.42
1961	4 019	19 709	12 099	1961	98.47	463	204.47
1960	3 854	17 006	11 704	1960	95.19	418	197.80
1959	3 618	16 875	11 020	1959	90.81	402	186.24
1958	3 389	15 307	10 227	1958	86.08	372	174.88
1957	3 198	14 570	10 214	1957	81.87	356	170.57
1956	2 989	13 560	9 944	1956	78.01	335	163.08

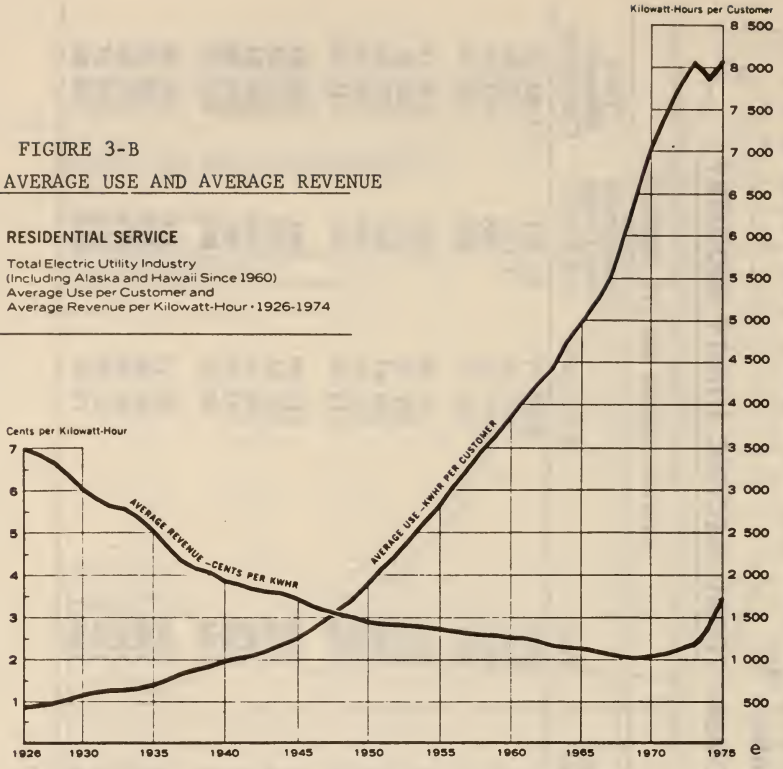
Source: EEI, Statistical Year Book, 1974.

FIGURE 3-B

AVERAGE USE AND AVERAGE REVENUE

RESIDENTIAL SERVICE

Total Electric Utility Industry
(Including Alaska and Hawaii Since 1960)
Average Use per Customer and
Average Revenue per Kilowatt-Hour · 1926-1974



SOURCE: EEI, Statistical Year Book, 1974.

TABLE 34

TOTAL ELECTRIC UTILITY INDUSTRY
AVERAGE REVENUES AND PERCENT CHANGE
BY CUSTOMER CLASS 1965 - 1974

	65	66	67	68	69	70	71	72	73	74
RESIDENTIAL			(Cents per Kwh)							
ALASKA	3.53	3.48	3.37	3.36	3.13	3.01	3.01	3.33	3.05	3.06
%		-1.5	-3.1	-0.5	-6.8	-3.7	-0.2	10.8	-8.4	0.3
ALABAMA	1.47	1.43	1.43	1.42	1.44	1.50	1.58	1.67	1.83	2.09
%		-2.6	0.0	-1.0	1.4	4.3	5.4	5.5	9.9	14.0
ARKANSAS	2.63	2.53	2.47	2.36	2.29	2.21	2.23	2.29	2.25	2.63
%		-4.0	-2.2	-4.3	-3.1	-3.4	1.0	2.7	-2.0	17.1
ARIZONA	2.40	2.32	2.32	2.30	2.24	2.27	2.23	2.38	2.49	2.90
%		-3.4	0.0	-0.6	-2.7	1.3	-1.6	6.5	4.6	16.4
CALIFORNIA	2.25	2.17	2.14	2.11	2.07	2.12	2.19	2.34	2.47	3.08
%		-3.6	-1.5	-1.2	-1.7	2.2	3.3	6.8	5.7	24.6
COLORADO	2.68	2.68	2.61	2.58	2.55	2.51	2.51	2.60	2.58	2.75
%		-0.2	-2.5	-1.2	-0.9	-1.7	0.1	3.6	-0.7	6.6
CONNECTICUT	2.65	2.57	2.48	2.43	2.38	2.34	2.52	2.79	3.02	4.04
%		-2.9	-3.7	-1.9	-1.8	-1.8	7.7	10.8	8.1	33.9
DELAWARE	2.58	2.52	2.49	2.45	2.47	2.44	2.62	3.04	3.13	4.08
%		-2.6	-1.1	-1.4	0.6	-0.9	7.1	15.9	3.2	30.3
FLORIDA	2.27	2.20	2.16	2.09	2.03	1.98	2.02	2.12	2.22	2.84
%		-3.0	-1.9	-3.5	-2.7	-2.5	2.1	4.8	5.0	27.8
GEORGIA	1.81	1.74	1.72	1.69	1.68	1.68	1.77	1.91	1.98	2.30
%		-3.6	-1.3	-1.7	-0.5	0.0	5.0	8.1	3.5	16.4
HAWAII	2.76	2.73	2.70	2.69	2.66	2.67	2.79	2.84	3.07	3.45
%		-1.1	-0.9	-0.7	-1.1	0.4	4.7	1.7	8.1	12.6
IOWA	2.70	2.67	2.59	2.55	2.52	2.51	2.56	2.68	2.71	2.88
%		-1.3	-3.0	-1.4	-1.1	-0.4	1.9	4.5	1.2	6.2
IDAHO	1.66	1.65	1.63	1.62	1.59	1.56	1.59	1.60	1.57	1.57
%		-0.3	-1.7	-0.6	-1.6	-1.9	1.9	0.6	-1.9	-0.3
ILLINOIS	2.73	2.67	2.64	2.59	2.56	2.59	2.68	2.84	2.94	3.25
%		-2.1	-1.2	-1.8	-1.1	0.9	3.6	6.0	3.6	10.3
INDIANA	2.33	2.28	2.24	2.21	2.17	2.13	2.12	2.28	2.31	2.43
%		-2.3	-1.6	-1.5	-2.0	-1.7	-0.2	7.3	1.4	5.2
KANSAS	2.53	2.52	2.49	2.42	2.37	2.33	2.37	2.37	2.34	2.47
%		-0.3	-1.0	-2.9	-2.1	-1.9	1.7	0.1	-1.4	5.9

SOURCE-EEI, STATISTICAL YEARBOOK, 1965-1974; CRS - ECONOMICS

TABLE 34 (Continued)
AVERAGE REVENUES AND PERCENT CHANGE - Cont.

RESIDENTIAL - Cont.	65	66	67	68	69	70	71	72	73	74
				(Cents per Kwh)						
KENTUCKY	2.07	2.05	2.02	1.89	1.95	1.90	1.74	1.76	1.99	2.16
%		-1.1	-1.8	-6.0	2.7	-2.3	-8.6	1.5	13.0	8.4
LOUISIANA	2.37	2.31	2.27	2.21	2.16	2.14	2.15	2.18	2.22	2.46
%		-2.7	-1.5	-2.8	-2.0	-1.3	0.5	1.5	1.8	11.0
MASSACHUSETTS	3.16	3.07	2.98	2.90	2.82	2.79	2.96	3.09	3.21	4.34
%		-2.8	-3.0	-2.6	-2.9	-1.0	6.1	4.3	4.0	35.3
MARYLAND	2.51	2.41	2.35	2.28	2.24	2.28	2.49	2.62	2.73	3.58
%		-4.0	-2.3	-2.9	-1.9	1.7	9.3	5.0	4.3	31.4
MAINE	3.02	2.99	2.86	2.75	2.71	2.64	2.61	2.73	2.77	3.14
%		-1.0	-4.3	-3.9	-1.6	-2.6	-0.9	4.5	1.4	13.3
MICHIGAN	2.41	2.35	2.32	2.27	2.24	2.27	2.32	2.42	2.54	2.97
%		-2.2	-1.5	-1.8	-1.4	1.2	2.3	4.2	5.0	16.7
MINNESOTA	2.50	2.44	2.39	2.38	2.39	2.37	2.43	2.55	2.55	2.78
%		-2.1	-2.4	-0.4	0.4	-0.8	2.7	4.6	0.1	9.2
MISSOURI	2.65	2.60	2.55	2.50	2.49	2.55	2.54	2.61	2.65	2.85
%		-1.9	-1.9	-2.1	-0.4	2.5	-0.6	2.8	1.5	7.9
MISSISSIPPI	1.86	1.77	1.76	1.69	1.70	1.64	1.78	1.97	1.89	2.31
%		-4.7	-0.9	-3.5	0.4	-3.5	8.6	10.3	-4.1	22.6
MONTANA	2.11	2.10	2.04	2.00	2.11	2.13	2.12	2.16	2.20	2.23
%		-0.7	-2.8	-1.9	5.3	1.2	-0.5	1.7	2.2	1.2
NEBRASKA	2.20	2.14	2.13	2.08	2.03	2.02	2.11	2.24	2.11	2.25
%		-2.8	-0.7	-2.4	-2.4	-0.6	4.5	6.4	-5.8	6.5
NORTH CAROLINA	1.90	1.87	1.84	1.81	1.78	1.77	1.89	2.04	2.09	2.50
%		-1.9	-1.4	-1.8	-1.4	-0.7	7.1	7.5	2.6	19.8
NORTH DAKOTA	2.68	2.61	2.54	2.58	2.56	2.53	2.53	2.60	2.58	2.64
%		-2.4	-2.7	1.4	-0.7	-1.1	-0.3	2.9	-0.7	2.3
NEW HAMPSHIRE	3.08	3.01	2.92	2.83	2.75	2.69	2.61	2.67	2.80	3.66
%		-2.4	-3.0	-3.2	-2.7	-2.2	-2.9	2.2	4.8	30.7
NEW JERSEY	2.70	2.64	2.60	2.57	2.53	2.54	2.88	3.06	3.25	4.42
%		-2.2	-1.5	-1.5	-1.5	0.6	13.3	6.4	6.0	36.0
NEW MEXICO	2.69	2.68	2.66	2.65	2.67	2.64	2.64	2.73	2.73	2.90
%		-0.6	-0.6	-0.3	0.5	-0.9	-0.2	3.3	0.3	6.3
NEVADA	1.47	1.45	1.46	1.47	1.43	1.45	1.45	1.56	1.56	1.88
%		-1.3	1.1	0.8	-2.8	1.0	0.3	7.4	-0.2	20.8

SOURCE-EEI, STATISTICAL YEARBOOK, 1965-1974; CRS - ECONOMICS

TABLE - 34 (Continued)

AVERAGE REVENUES AND PERCENT CHANGE - Cont.

RESIDENTIAL - Cont.	65	66	67	68	69	70	71	72	73	74
				(Cents per Kwh)						
NEW YORK	3.02	2.95	2.98	2.91	2.84	2.87	3.07	3.26	3.51	4.66
%		-2.1	1.0	-2.4	-2.3	0.8	7.0	6.3	7.9	32.7
OHIO	2.45	2.40	2.37	2.32	2.27	2.27	2.33	2.38	2.42	2.91
%		-2.0	-1.1	-2.0	-2.2	-0.1	2.7	2.0	2.0	19.9
OKLAHOMA	2.68	2.61	2.59	2.53	2.47	2.41	2.41	2.40	2.32	2.38
%		-2.7	-0.9	-2.2	-2.4	-2.5	-0.0	-0.2	-3.4	2.7
OREGON	1.23	1.21	1.19	1.19	1.18	1.19	1.26	1.28	1.33	1.45
%		-1.0	-1.6	-0.6	-0.4	0.4	6.0	1.7	3.8	9.6
PENNSYLVANIA	2.39	2.33	2.28	2.23	2.21	2.32	2.61	2.77	2.89	3.53
%		-2.3	-2.2	-2.4	-1.0	5.3	12.6	6.0	4.4	22.0
RHODE ISLAND	3.16	3.10	3.03	2.87	2.80	2.74	2.77	3.12	3.25	4.55
%		-2.0	-2.1	-5.4	-2.2	-2.3	1.3	12.4	4.3	39.9
SOUTH CAROLINA	1.98	1.94	1.92	1.86	1.83	1.83	1.96	2.11	2.14	2.59
%		-2.0	-1.1	-3.0	-1.6	-0.0	7.3	7.4	1.5	20.9
SOUTH DAKOTA	2.65	2.61	2.56	2.53	2.54	2.52	2.50	2.54	2.51	2.63
%		-1.5	-1.8	-1.0	0.4	-0.9	-0.6	1.5	-1.2	4.6
TENNESSEE	0.92	0.90	0.91	0.93	0.99	1.08	1.26	1.26	1.33	1.56
%		-2.6	1.8	2.3	6.7	8.9	16.8	-0.1	5.5	17.5
TEXAS	2.29	2.24	2.19	2.15	2.09	2.05	2.04	2.07	2.11	2.41
%		-2.0	-2.5	-1.6	-3.0	-2.0	-0.2	1.5	1.9	13.8
UTAH	2.28	2.25	2.25	2.23	2.20	2.17	2.23	2.24	2.23	2.29
%		-1.2	-0.1	-0.7	-1.5	-1.2	2.6	0.6	-0.6	3.0
VIRGINA	2.16	2.09	2.05	1.98	1.93	1.98	2.02	2.10	2.21	2.82
%		-2.8	-2.3	-3.1	-2.5	2.5	2.1	4.0	4.8	27.9
VERMONT	2.49	2.33	2.26	2.25	2.21	2.17	2.22	2.45	2.59	3.08
%		-6.6	-2.7	-0.6	-1.6	-2.0	2.3	10.5	6.0	18.6
WASHINGTON	1.08	1.05	1.03	1.02	1.01	1.01	1.02	1.05	1.07	1.12
%		-3.4	-1.6	-1.0	-0.8	0.1	0.5	3.4	2.1	3.9
WISCONSON	2.25	2.19	2.15	2.13	2.16	2.19	2.23	2.39	2.52	2.73
%		-2.5	-2.1	-0.8	1.0	1.6	1.7	7.3	5.6	8.1
WEST VIRGINIA	2.37	2.28	2.23	2.17	2.12	2.08	2.18	2.32	2.33	2.72
%		-3.6	-2.5	-2.6	-2.3	-1.9	5.0	6.1	0.5	17.0
WYOMING	2.59	2.54	2.49	2.49	2.47	2.44	2.43	2.48	2.34	2.38
%		-2.1	-1.7	-0.2	-0.7	-1.3	-0.3	2.1	-6.0	1.9

SOURCE-EEI, STATISTICAL YEARBOOK, 1965-1974; CRS - ECONOMICS

TABLE 34 (Continued)

AVERAGE REVENUES AND PERCENT CHANGE - Cont.

	65	66	67	68	69	70	71	72	73	74
COMMERCIAL				(Cents per Kwh)						
ALASKA	3.59	3.51	3.39	3.35	3.10	3.12	3.22	3.55	3.27	3.26
%		-2.3	-3.3	-1.3	-7.4	0.6	3.1	10.3	-7.9	-0.1
ALABAMA	1.76	1.74	1.73	1.69	1.68	1.70	1.78	1.88	2.12	2.41
%		-1.6	-0.4	-2.1	-0.6	0.9	5.0	5.6	12.8	13.7
ARKANSAS	2.26	2.19	2.15	2.09	2.04	2.02	2.08	2.15	2.17	2.53
%		-3.2	-1.6	-3.0	-2.5	-0.9	3.0	3.5	0.9	16.7
ARIZONA	1.99	1.85	1.81	1.86	1.85	1.89	1.90	2.07	2.14	2.50
%		-6.6	-2.5	3.2	-0.6	1.9	0.8	8.8	3.2	17.2
CALIFORNIA	1.82	1.72	1.74	1.70	1.73	1.75	1.84	1.95	2.12	2.76
%		-5.3	0.9	-2.1	1.3	1.3	5.1	6.2	8.7	30.2
COLORADO	2.10	2.07	2.07	2.04	2.02	1.99	2.00	2.07	2.07	2.24
%		-1.3	-0.4	-1.2	-1.1	-1.6	0.8	3.5	-0.2	8.3
CONNECTICUT	2.53	2.45	2.37	2.30	2.25	2.21	2.33	2.58	2.73	3.81
%		-3.3	-3.2	-2.7	-2.3	-1.8	5.3	11.0	5.7	39.5
DELAWARE	2.07	2.07	2.08	2.05	2.05	2.07	2.23	2.55	2.70	3.71
%		-0.1	0.6	-1.6	0.4	0.6	7.9	14.6	5.7	37.5
FLORIDA	2.49	2.36	2.25	2.20	2.17	2.14	2.18	2.26	2.37	3.06
%		-5.2	-4.5	-2.5	-1.1	-1.4	2.0	3.4	5.0	28.9
GEORGIA	1.99	1.98	1.96	1.91	1.88	1.87	1.95	2.08	2.20	2.68
%		-0.6	-1.0	-2.9	-1.3	-0.6	4.1	6.9	5.8	21.8
HAWAII	3.28	3.24	3.22	3.19	3.20	3.27	3.47	3.50	3.69	4.12
%		-1.2	-0.6	-1.0	0.5	2.2	6.0	1.1	5.2	11.9
IOWA	2.69	2.63	2.58	2.53	2.50	2.49	2.56	2.66	2.69	2.88
%		-2.3	-1.8	-2.1	-1.1	-0.4	2.6	4.1	1.1	7.3
IDAHO	1.54	1.41	1.42	1.41	1.38	1.39	1.44	1.45	1.43	1.41
%		-8.2	0.4	-1.0	-2.1	1.2	3.0	1.0	-1.4	-1.7
ILLINOIS	2.33	2.28	2.26	2.25	2.24	2.29	2.39	2.55	2.62	3.02
%		-2.2	-0.8	-0.4	-0.6	2.1	4.7	6.7	2.5	15.2
INDIANA	2.27	2.22	2.17	2.12	2.10	2.08	2.08	2.25	2.31	2.42
%		-2.2	-2.3	-1.9	-1.4	-0.8	-0.1	8.5	2.7	4.8
KANSAS	2.14	2.13	2.09	2.04	2.00	1.96	1.98	2.00	2.04	2.20
%		-0.1	-1.9	-2.7	-2.0	-1.8	1.0	1.1	1.9	7.9

SOURCE-EEI, STATISTICAL YEARBOOK, 1965-1974; CRS - ECONOMICS

TABLE 34 (Continued)

AVERAGE REVENUES AND PERCENT CHANGE - Cont.

COMMERCIAL - Cont.	65	66	67	68	69	70	71	72	73	74
				(Cents per Kwh)						
KENTUCKY	2.09	2.06	1.97	1.89	1.86	1.85	1.61	1.65	1.31	1.42
%		-1.6	-4.2	-4.4	-1.2	-0.9	-12.9	2.4	-20.2	8.1
LOUISIANA	2.20	2.14	2.10	2.04	2.02	1.99	1.99	2.02	2.14	2.39
%		-2.6	-2.2	-2.9	-0.9	-1.6	0.2	1.5	5.7	11.9
MASSACHUSETTS	2.96	2.85	2.75	2.56	2.53	2.52	2.70	2.78	2.87	4.13
%		-3.6	-3.4	-6.9	-1.4	-0.5	7.2	3.1	3.0	44.0
MARYLAND	2.12	2.07	2.06	2.04	2.02	2.14	2.32	2.44	2.56	3.59
%		-2.4	-0.6	-1.2	-0.6	5.9	8.3	4.9	5.1	40.0
MAINE	3.06	2.94	2.77	2.70	2.65	2.58	2.54	2.69	2.72	3.15
%		-3.7	-5.9	-2.5	-2.1	-2.3	-1.8	6.0	1.2	15.6
MICHIGAN	2.38	2.34	2.29	2.25	2.25	2.32	2.37	2.44	2.55	3.00
%		-1.6	-2.0	-1.7	-0.1	3.0	2.4	2.7	4.5	17.8
MINNESOTA	2.75	2.70	2.65	2.64	2.63	2.59	2.64	2.74	2.76	3.05
%		-1.8	-1.7	-0.3	-0.4	-1.6	2.0	3.8	0.6	10.5
MISSOURI	2.43	2.38	2.33	2.28	2.29	2.30	2.38	2.44	2.50	2.73
%		-1.8	-2.2	-2.1	0.4	0.4	3.5	2.4	2.7	9.0
MISSISSIPPI	1.81	1.77	1.76	1.78	1.78	1.79	1.91	2.08	2.06	2.55
%		-2.3	-0.2	1.0	-0.2	0.9	6.7	8.5	-0.6	23.4
MONTANA	1.94	1.92	1.89	1.84	1.93	1.94	1.94	1.98	2.05	2.05
%		-0.8	-1.8	-2.9	5.2	0.5	-0.1	2.3	3.1	-0.0
NEBRASKA	1.80	1.78	1.71	1.65	1.61	1.61	1.68	1.80	1.78	1.93
%		-1.4	-4.0	-3.1	-2.7	0.0	4.7	6.7	-0.9	8.7
NORTH CAROLINA	1.69	1.66	1.62	1.57	1.54	1.53	1.63	1.75	1.81	2.29
%		-2.0	-2.1	-3.2	-2.1	-0.6	6.6	7.3	3.6	26.3
NORTH DAKOTA	2.75	2.63	2.35	2.28	2.26	2.26	2.24	2.33	2.33	2.40
%		-4.1	-10.9	-2.8	-0.9	0.1	-0.9	3.6	-0.0	3.1
NEW HAMPSHIRE	3.25	3.17	3.10	2.90	2.85	2.80	2.74	2.85	2.95	3.91
%		-2.4	-2.2	-6.4	-1.8	-1.6	-2.1	3.8	3.7	32.3
NEW JERSEY	2.44	2.41	2.39	2.36	2.33	2.36	2.66	2.79	2.95	4.20
%		-1.5	-0.9	-1.0	-1.4	1.1	13.0	4.7	5.9	42.4
NEW MEXICO	2.10	2.08	2.03	2.03	2.03	2.00	2.00	2.11	2.09	2.25
%		-1.1	-2.0	-0.4	0.1	-1.3	0.1	5.0	-0.9	7.7
NEVADA	1.67	1.61	1.59	1.57	1.56	1.57	1.62	1.75	1.79	2.10
%		-3.4	-1.3	-0.9	-1.2	0.8	3.2	8.2	2.1	17.8

SOURCE-EEI, STATISTICAL YEARBOOK, 1965-1974; CRS - ECONOMICS

TABLE 34 (Continued)

AVERAGE REVENUES AND PERCENT CHANGE - Cont.

COMMERCIAL - Cont.	65	66	67	68	69	70	71	72	73	74
				(Cents per Kwh)						
NEW YORK	2.58	2.52	2.55	2.54	2.50	2.61	3.02	3.25	3.40	4.86
%		-2.1	1.1	-0.7	-1.4	4.6	15.6	7.7	4.3	43.0
OHIO	2.24	2.20	2.17	2.13	2.10	2.07	2.17	2.21	2.26	2.77
%		-2.0	-1.1	-2.0	-1.3	-1.3	4.5	2.2	2.1	22.4
OKLAHOMA	2.11	2.06	2.01	1.97	1.94	1.92	1.94	1.99	1.93	2.01
%		-2.4	-2.4	-2.1	-1.4	-1.4	1.5	2.4	-3.2	4.3
OREGON	1.35	1.30	1.27	1.26	1.25	1.24	1.31	1.31	1.35	1.49
%		-4.2	-2.1	-0.4	-1.3	-0.7	6.3	-0.3	2.7	10.6
PENNSYLVANIA	2.18	2.11	2.07	2.02	1.98	2.09	2.34	2.46	2.56	3.19
%		-3.5	-1.8	-2.6	-1.7	5.4	12.2	4.8	4.3	24.4
RHODE ISLAND	3.20	3.12	3.05	2.34	2.24	2.22	2.26	2.56	2.67	4.01
%		-2.4	-2.4	-23.3	-4.2	-1.1	2.0	13.2	4.5	50.1
SOUTH CAROLINA	1.82	1.74	1.64	1.62	1.63	1.63	1.74	1.80	1.86	2.37
%		-4.3	-5.7	-1.4	0.7	0.1	6.6	3.4	3.3	27.2
SOUTH DAKOTA	2.85	2.78	2.69	2.67	2.68	2.67	2.65	2.63	2.67	2.84
%		-2.2	-3.4	-0.6	0.2	-0.4	-0.5	-0.8	1.6	6.2
TENNESSEE	1.27	1.24	1.27	1.28	1.37	1.48	1.65	1.65	1.73	1.97
%		-1.9	2.0	1.1	6.6	8.2	11.6	0.0	4.9	13.7
TEXAS	1.88	1.82	1.79	1.77	1.75	1.72	1.73	1.77	1.80	2.07
%		-3.0	-2.1	-1.1	-1.1	-1.4	0.2	2.5	1.6	15.5
UTAH	2.04	2.01	2.00	1.95	1.91	1.87	1.90	1.95	1.96	2.02
%		-1.1	-1.0	-2.5	-1.7	-2.5	2.0	2.7	0.5	2.9
VIRGINA	1.79	1.74	1.81	1.80	1.75	1.79	1.88	1.97	2.02	2.73
%		-2.5	4.0	-0.8	-2.5	2.2	5.0	4.9	2.4	34.9
VERMONT	2.45	2.37	2.33	2.32	2.29	2.25	2.28	2.50	2.68	3.30
%		-3.4	-1.9	-0.3	-1.0	-2.1	1.4	9.7	7.4	23.1
WASHINGTON	1.30	1.15	1.12	1.17	1.16	1.16	1.17	1.20	1.20	1.26
%		-11.2	-3.2	5.0	-0.9	-0.6	1.1	2.7	0.3	4.4
WISCONSON	2.40	2.31	2.27	2.24	2.30	2.39	2.43	2.59	2.73	2.88
%		-3.9	-1.8	-1.0	2.6	3.8	1.7	6.4	5.5	5.5
WEST VIRGINIA	2.08	1.99	1.95	1.88	1.84	1.84	1.99	2.12	2.15	2.57
%		-4.4	-2.1	-3.4	-2.1	-0.2	7.9	6.6	1.7	19.4
WYOMING	1.83	1.79	1.78	1.74	1.73	1.71	1.74	1.84	1.71	1.69
%		-2.3	-0.7	-2.4	-0.3	-1.5	2.0	5.4	-6.8	-1.2

SOURCE-EEI, STATISTICAL YEARBOOK, 1965-1974; CRS - ECONOMICS

TABLE 34 (Continued)
AVERAGE REVENUES AND PERCENT CHANGE - Cont.

	65	66	67	68	69	70	71	72	73	74
INDUSTRIAL				(Cents per Kwh)						
ALASKA	1.90	1.75	1.85	1.76	1.68	1.71	1.74	1.84	1.99	2.03
%		-7.9	5.6	-4.7	-4.7	2.3	1.9	5.6	8.3	1.8
ALABAMA	0.63	0.63	0.64	0.66	0.66	0.72	0.82	0.86	0.96	1.22
%		0.5	0.5	3.8	0.0	8.1	14.5	5.0	12.0	26.5
ARKANSAS	0.84	0.81	0.86	0.88	0.88	0.89	0.94	1.01	1.14	1.56
%		-3.2	5.4	2.5	0.2	1.1	6.0	7.3	13.1	36.1
ARIZONA	1.13	1.12	1.16	1.14	1.13	1.14	1.18	1.21	1.42	1.76
%		-0.8	3.7	-2.5	-0.8	1.0	3.3	2.7	18.0	23.8
CALIFORNIA	0.95	0.90	0.92	0.91	0.92	0.93	0.98	1.07	1.21	1.80
%		-6.0	2.9	-1.0	0.4	1.2	5.6	8.8	13.3	49.2
COLORADO	1.22	1.20	1.16	1.15	1.15	1.12	1.12	1.20	1.32	1.42
%		-1.7	-3.2	-0.9	0.1	-2.9	0.3	7.0	9.7	7.8
CONNECTICUT	1.41	1.37	1.36	1.35	1.34	1.36	1.52	1.74	1.92	2.85
%		-2.7	-0.9	-0.2	-0.7	1.6	11.4	14.6	10.1	48.9
DELAWARE	0.87	0.84	0.86	0.87	0.91	0.99	1.23	1.51	1.73	2.56
%		-2.9	2.3	0.9	4.5	8.9	23.8	22.9	14.6	48.1
FLORIDA	1.16	1.12	1.10	1.10	1.14	1.14	1.17	1.28	1.39	1.89
%		-3.4	-2.0	-0.3	3.5	0.1	2.7	10.0	8.1	36.0
GEORGIA	0.89	0.87	0.87	0.88	0.89	0.93	1.01	1.08	1.18	1.61
%		-2.3	0.8	0.1	2.1	4.2	8.8	6.9	9.2	35.9
HAWAII	1.48	1.47	1.48	1.48	1.46	1.47	1.59	1.63	1.80	2.07
%		-0.6	0.7	0.0	-1.2	0.3	8.1	2.6	10.6	15.2
IOWA	1.22	1.20	1.22	1.25	1.22	1.24	1.30	1.35	1.41	1.57
%		-1.3	1.9	2.2	-2.2	1.1	5.2	4.1	3.8	12.0
IDAHO	0.58	0.57	0.58	0.58	0.58	0.59	0.61	0.62	0.65	0.69
%		-1.2	1.7	-0.9	0.6	0.9	3.2	2.3	4.5	6.7
ILLINOIS	1.08	1.06	1.06	1.07	1.08	1.14	1.22	1.31	1.36	1.64
%		-1.9	0.7	0.3	1.1	5.5	7.0	7.4	4.0	20.3
INDIANA	1.14	1.12	1.11	1.11	1.09	1.12	1.16	1.25	1.28	1.43
%		-1.9	-0.2	-0.8	-1.5	3.2	3.3	7.9	2.4	11.2
KANSAS	1.10	1.10	1.09	1.10	1.10	1.12	1.13	1.15	1.21	1.34
%		0.0	-0.8	1.0	0.2	1.3	1.4	1.5	4.9	11.2

SOURCE-EEI, STATISTICAL YEARBOOK, 1965-1974; CRS - ECONOMICS

TABLE 34 (Continued)

AVERAGE REVENUES AND PERCENT CHANGE - Cont.

INDUSTRIAL - Cont.	65	66	67	68	69	70	71	72	73	74
				(Cents per Kwh)						
KENTUCKY	0.54	0.56	0.58	0.60	0.63	0.69	0.77	0.80	0.85	1.04
%		4.3	3.8	1.9	4.9	10.2	11.3	4.4	6.2	22.4
LOUISIANA	0.86	0.81	0.81	0.80	0.80	0.80	0.81	0.84	0.98	1.25
%		-6.0	0.4	-1.1	-0.2	-0.7	2.4	2.9	16.8	27.7
MASSACHUSETTS	1.63	1.59	1.59	1.53	1.53	1.56	1.74	1.88	2.01	3.13
%		-2.2	-0.2	-3.7	-0.4	2.1	11.7	8.2	6.8	55.5
MARYLAND	1.18	1.16	1.16	1.16	1.18	1.21	1.34	1.42	1.54	2.34
%		-2.1	0.3	0.3	1.1	3.1	10.8	5.8	8.0	51.9
MAINE	1.26	1.23	1.22	1.15	1.15	1.12	1.16	1.26	1.31	1.87
%		-2.2	-0.8	-5.7	-0.2	-2.2	3.7	8.4	4.1	42.5
MICHIGAN	1.13	1.08	1.09	1.08	1.09	1.19	1.29	1.35	1.44	1.90
%		-4.0	1.3	-1.1	0.8	9.4	7.8	4.5	7.1	32.2
MINNESOTA	1.41	1.38	1.34	1.31	1.31	1.33	1.40	1.47	1.49	1.74
%		-2.3	-2.7	-2.8	0.4	1.6	5.2	4.9	1.0	17.0
MISSOURI	1.21	1.19	1.19	1.19	1.20	1.28	1.34	1.41	1.50	1.70
%		-1.4	-0.0	-0.0	1.1	6.4	4.9	5.0	6.3	13.4
MISSISSIPPI	0.88	0.86	0.87	0.90	0.92	0.94	1.02	1.09	1.20	1.64
%		-2.0	1.0	3.0	2.1	2.3	8.7	6.7	9.7	37.1
MONTANA	0.44	0.43	0.42	0.40	0.41	0.42	0.43	0.44	0.53	0.50
%		-3.4	-0.5	-4.5	0.4	4.6	0.7	4.1	19.1	-5.1
NEBRASKA	1.08	1.05	1.07	1.07	1.08	1.09	1.16	1.21	1.27	1.32
%		-2.8	2.0	-0.0	0.9	1.2	5.7	4.9	4.9	3.7
NORTH CAROLINA	0.84	0.85	0.85	0.84	0.85	0.88	0.94	1.01	1.09	1.53
%		0.8	0.1	-0.6	0.2	4.0	6.9	6.9	8.5	40.5
NORTH DAKOTA	2.00	1.99	1.98	1.97	1.93	1.90	1.93	2.02	2.05	2.18
%		-0.4	-0.8	-0.6	-1.9	-1.4	1.6	4.9	1.1	6.7
NEW HAMPSHIRE	1.40	1.40	1.39	1.34	1.33	1.34	1.32	1.37	1.52	2.36
%		-0.1	-0.8	-4.0	-0.1	0.0	-1.0	3.7	10.7	55.5
NEW JERSEY	1.17	1.16	1.17	1.20	1.20	1.24	1.50	1.61	1.76	2.82
%		-1.3	1.3	2.2	0.0	3.9	20.8	6.9	9.4	60.4
NEW MEXICO	1.16	1.12	1.09	1.09	1.09	1.10	1.10	1.15	1.21	1.44
%		-2.9	-3.3	0.1	0.3	0.9	0.2	4.7	4.5	19.8
NEVADA	0.45	0.54	0.61	0.64	0.65	0.68	0.73	0.78	0.94	1.34
%		17.7	13.7	5.9	0.5	5.8	6.9	6.6	20.4	42.8

SOURCE-EEI, STATISTICAL YEARBOOK, 1965-1974; CRS - ECONOMICS

TABLE 34 (Continued)

AVERAGE REVENUES AND PERCENT CHANGE - Cont.

INDUSTRIAL - Cont.	65	66	67	68	69	70	71	72	73	74
				(Cents per Kwh)						
NEW YORK	1.04	1.03	1.04	1.07	1.06	1.12	1.26	1.34	1.43	2.12
%		-0.9	1.3	2.6	-1.0	6.0	12.4	6.5	6.4	48.3
OHIO	0.80	0.84	0.85	0.86	0.88	0.93	1.00	1.01	1.05	1.45
%		5.4	1.2	1.2	2.0	5.1	7.9	1.1	3.9	37.9
OKLAHOMA	1.01	1.01	1.00	1.01	1.00	1.00	1.00	1.01	1.03	1.12
%		-0.6	-0.1	0.2	-0.3	-0.6	0.0	1.2	1.8	8.9
OREGON	0.40	0.40	0.39	0.38	0.39	0.40	0.44	0.46	0.46	0.49
%		0.6	-2.9	-1.2	1.4	3.6	8.1	5.7	-0.4	7.9
PENNSYLVANIA	1.08	1.05	1.06	1.04	1.04	1.13	1.34	1.42	1.49	2.10
%		-2.9	0.7	-1.8	0.1	8.8	18.2	6.2	4.9	40.9
RHODE ISLAND	1.64	1.60	1.59	1.52	1.50	1.54	1.69	1.87	1.98	3.28
%		-2.3	-0.6	-4.2	-1.8	3.3	9.5	10.8	5.4	66.2
SOUTH CAROLINA	0.74	0.74	0.74	0.74	0.73	0.77	0.85	0.88	0.99	1.41
%		0.2	0.4	-0.5	-0.3	5.0	9.6	3.7	12.5	42.9
SOUTH DAKOTA	1.40	1.41	1.43	1.44	1.45	1.51	1.59	1.65	1.64	1.75
%		0.3	1.9	0.6	0.5	3.9	5.6	3.5	-0.2	6.3
TENNESSEE	0.50	0.50	0.52	0.54	0.58	0.65	0.79	0.79	0.83	1.02
%		0.2	3.4	4.8	7.3	12.3	21.6	-0.6	5.7	22.2
TEXAS	0.88	0.85	0.83	0.82	0.80	0.80	0.80	0.84	0.92	1.16
%		-3.8	-2.4	-1.4	-2.0	0.1	0.1	4.6	9.4	25.9
UTAH	1.23	1.20	1.26	1.26	1.22	1.20	1.26	1.32	1.31	1.41
%		-1.7	4.4	0.0	-3.2	-1.6	5.4	4.5	-0.5	7.2
VIRGINA	0.96	0.95	0.96	0.95	0.95	0.98	1.07	1.16	1.21	1.82
%		-0.7	1.0	-1.5	0.4	3.5	9.1	8.3	4.1	50.7
VERMONT	1.42	1.38	1.44	1.46	1.45	1.44	1.49	1.67	1.78	2.25
%		-2.5	4.0	1.6	-0.9	-0.2	3.5	11.6	6.5	26.8
WASHINGTON	0.31	0.31	0.31	0.31	0.30	0.31	0.32	0.32	0.34	0.33
%		-0.7	-0.3	1.3	-4.2	3.3	2.8	0.5	4.4	-0.8
WISCONSON	1.29	1.25	1.25	1.24	1.28	1.35	1.42	1.49	1.57	1.71
%		-3.0	-0.2	-0.6	3.3	5.5	5.2	4.7	5.8	8.9
WEST VIRGINIA	0.81	0.80	0.81	0.80	0.80	0.84	0.96	1.05	1.09	1.52
%		-0.6	1.0	-1.4	0.5	4.2	14.0	10.0	3.7	39.8
WYOMING	0.92	0.91	1.00	1.02	1.03	1.03	1.04	1.05	1.05	1.07
%		-0.4	9.1	2.8	0.2	0.5	0.6	0.9	0.2	1.9

SOURCE-EEI, STATISTICAL YEARBOOK, 1965-1974; CRS - ECONOMICS

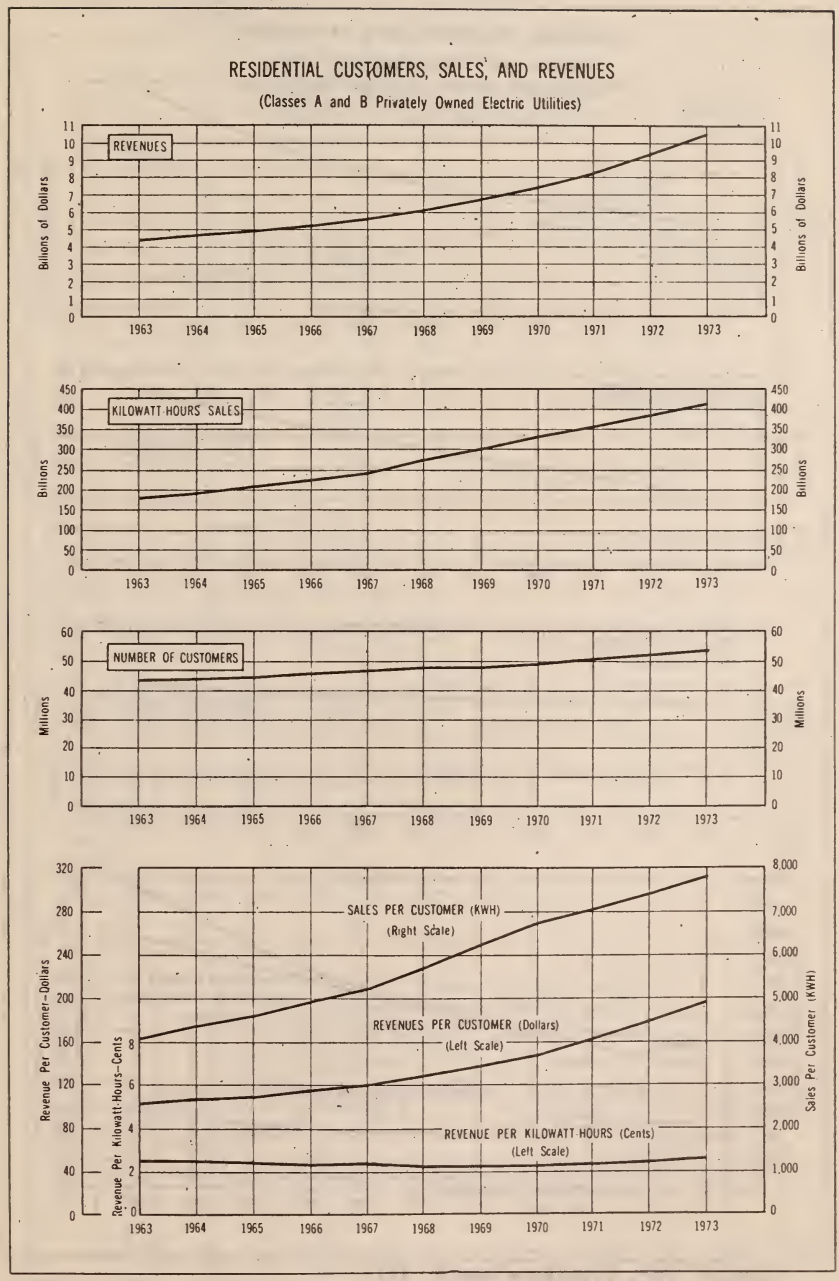
TABLE 35- — *Privately owned class A and class B electric utilities in the United States*

COMPOSITE ELECTRIC OPERATING REVENUES, CUSTOMERS AND SALES, YEAR ENDED DECEMBER 31

Item	1973		1972	
	Amount	Percent of total	Amount	Percent of total
Number of customers (average per month):				
Residential	53,759,712	88.1	52,232,154	88.0
Commercial and industrial:				
Small (or commercial)	6,753,829	11.1	6,598,437	11.1
Large (or industrial)	295,489	.5	280,687	.5
Public street and highway lighting	95,371	.1	89,973	.2
Other public authorities	118,877	.2	123,744	.2
Railroads and railways	1,875	0	64	0
Interdepartmental	1,051	0	429	0
Total utiltimate consumers	61,026,204	100.0	59,325,488	100.0
Resale	4,151	0	4,138	0
Total customers	61,030,355	100.0	59,329,626	100.0
Kilowatt-hour sales (thousands):				
Residential	416,187,590	26.4	386,054,191	26.4
Commercial and industrial:				
Small (or commercial)	323,909,396	20.5	299,493,322	20.4
Large (or industrial)	550,782,904	35.0	510,816,008	34.9
Public street and highway lighting	10,049,278	.6	9,590,411	.7
Other public authorities	35,661,574	2.3	34,587,515	2.4
Railroads and railways	2,070,179	.1	2,131,132	.1
Interdepartmental	2,021,088	.1	1,721,034	.1
Total sales to ultimate consumers	1,340,682,009	85.0	1,244,393,613	85.0
For resale	237,439,413	15.0	220,346,742	15.0
Total kilowatt-hour sales	1,578,121,422	100.0	1,464,740,355	100.0
Revenues (thousands of dollars):				
Residential	10,565,767	36.3	9,347,619	36.9
Commercial and industrial:				
Small (or commercial)	7,822,152	27.0	6,873,359	27.1
Large (or industrial)	6,864,855	23.6	5,942,793	23.4
Public street and highway lighting	413,038	1.4	378,679	1.5
Other public authorities	578,492	2.0	520,545	2.1
Railroads and railways	40,325	.1	38,021	.1
Interdepartmental	16,371	0	11,934	0
Total revenues from ultimate consumers	26,301,000	90.4	23,112,950	91.1
Revenues from sales for resale	2,374,244	8.2	1,866,570	7.4
Total revenues from sales of electric energy	28,675,244	98.6	24,979,520	98.5
Other operating revenues	429,250	1.4	375,348	1.5
Total electric operating revenues	29,104,494	100.0	25,354,868	100.0

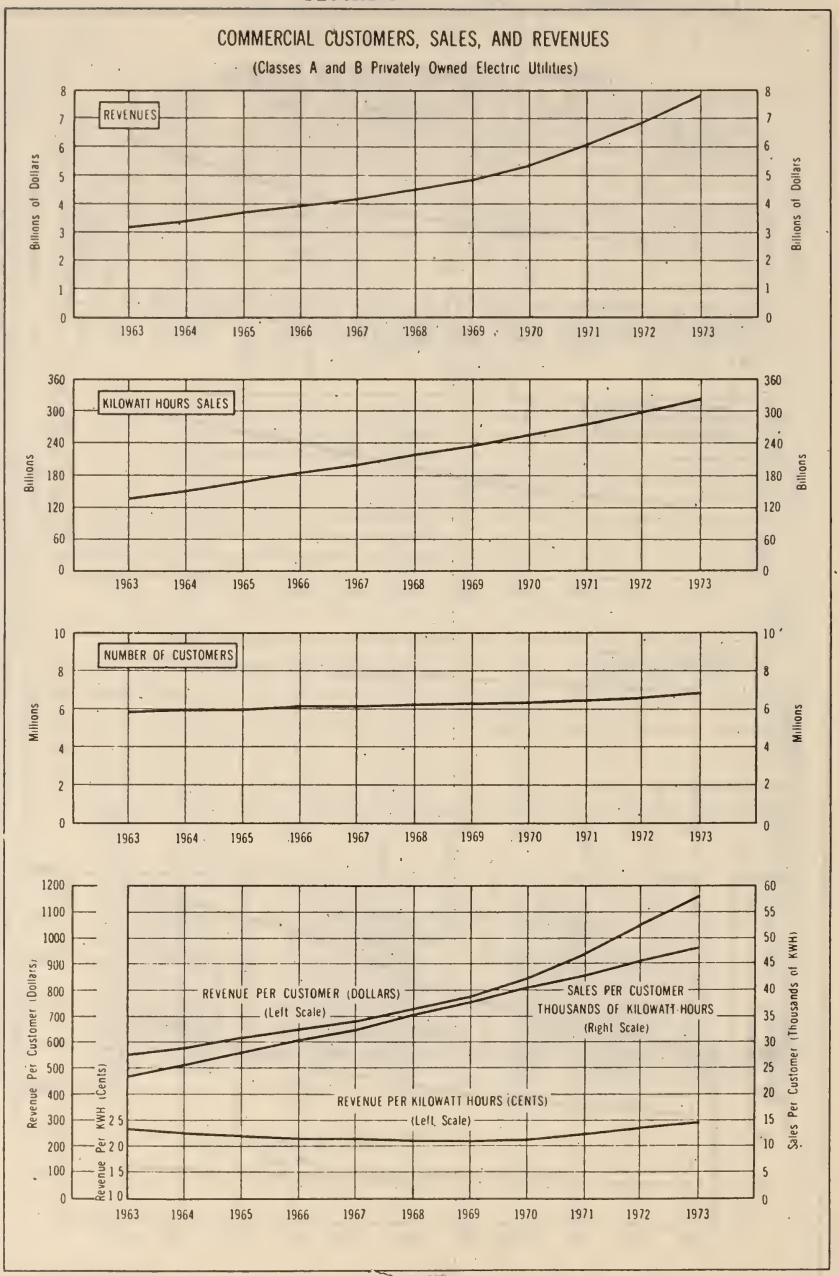
SOURCE: FPC, Privately Owned, 1973.

FIGURE 4



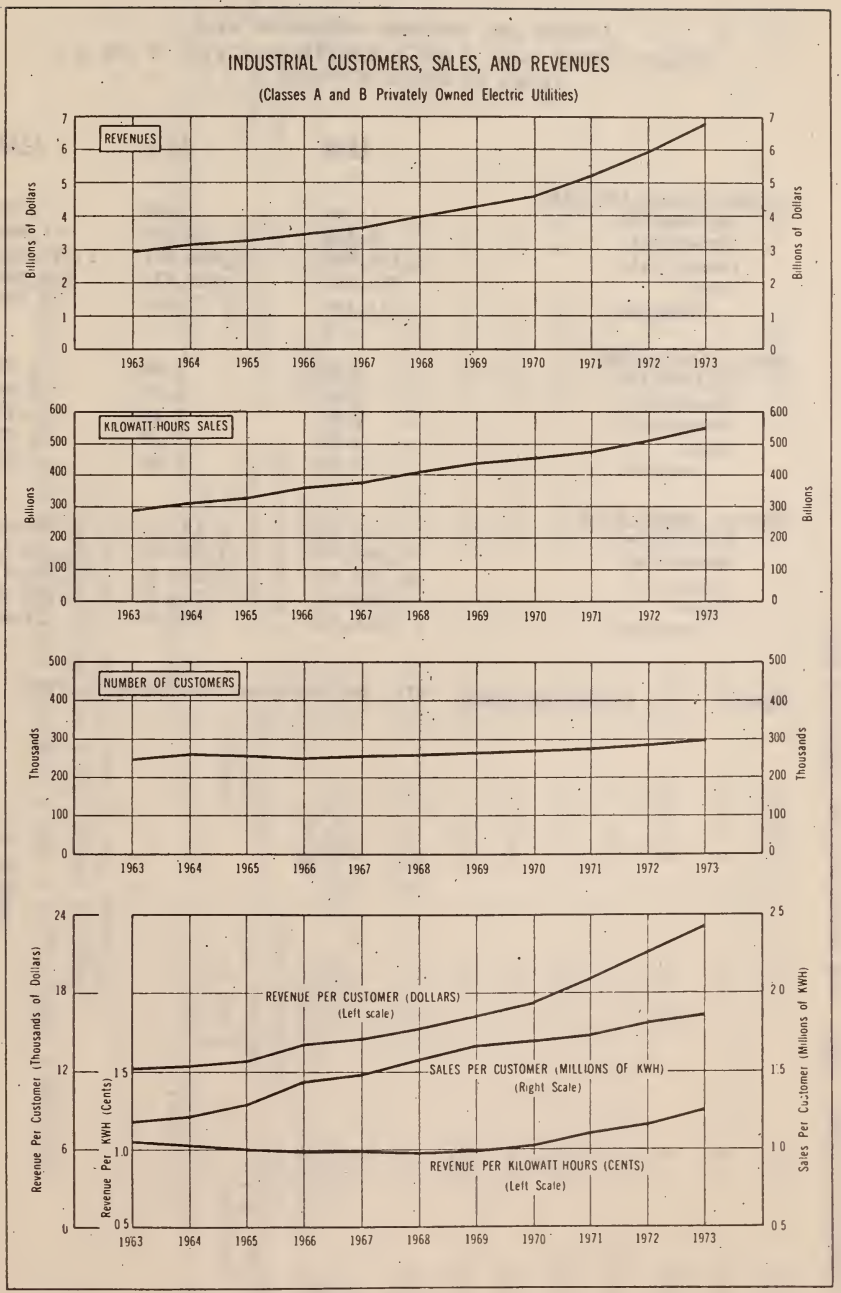
SOURCE: FPC, Privately Owned, 1973

FIGURE 5



SOURCE: FPC, Privately Owned, 1973.

FIGURE 6



SOURCE: FPC, Privately Owned, 1973.

TABLE 36

AVERAGE USE, REVENUES AND ANNUAL BILL
PRIVATELY OWNED CLASS A AND B ELECTRIC UTILITIES IN THE U.S.
12-MONTHS ENDING NOVEMBER 30

	1975	1974	1973
Average Annual Kwh Used			
Residential	7,795	7,480	7,701
Commercial	49,229	46,604	47,906
Industrial	1,576,694	1,660,271	1,713,821
Other	214,864	211,237	236,597
Combined	21,206	21,181	21,793
Average Cost ¢/Kwh			
Residential	3.49¢	3.04¢	2.52¢
Commercial	3.44	2.99	2.40
Industrial	2.05	1.64	1.23
Other	3.07	2.70	2.08
Combined	2.91	2.44	1.95
Average Annual Bill			
Residential	$ 272.20	$ 227.37	$ 194.01
Commercial	1,691.79	1,393.38	1,148.51
Industrial	32,390.56	27,236.91	21,130.13
Other	6,593.87	5,713.37	4,930.56
Combined	616.55	516.70	424.40

Source: FPC, Privately Owned, 1973, and conversations with the FPC.

TABLE 37

PRIVATELY OWNED CLASS A AND B ELECTRIC UTILITIES IN THE UNITED STATES

Average Annual Bill and Average Cost to Consumer Per Kilowatt-Hour - 1965-1974

Year	Residential			Commercial			Industrial		
	Average Annual Bill		Average Cost to Consumer Per Kilowatt-Hour (cents)	Average Annual Bill		Average Cost to Consumer Per Kilowatt-Hour (cents)	Average Annual Bill		Average Cost to Consumer Per Kilowatt-Hour (cents)
	Amount	% of Increase		Amount	% of Increase		Amount	% of Increase	
1974	$233.85	19.0%	3.10¢	$1,428.23	23.3%	3.04¢	$28,802.64	24.0%	1.69¢
1973	196.54	9.8	2.54	1,158.12	11.7	2.41	23,232.21	9.7	1.25
1972	178.96	9.7	2.42	1,041.73	11.1	2.30	21,172.31	10.7	1.16
1971	163.08	9.5	2.32	937.47	11.3	2.20	19,127.74	10.9	1.10
1970	148.92	7.9	2.22	842.51	9.0	2.08	17,254.42	5.8	1.02
1969	137.99	7.4	2.21	773.22	6.6	2.06	16,314.82	5.9	.98
1968	128.43	6.7	2.25	725.30	6.7	2.07	15,399.55	6.1	.97
1967	120.38	4.3	2.31	679.94	5.6	2.11	14,518.37	2.8	.98
1966	115.37	4.4	2.34	643.81	4.9	2.13	14,126.37	9.8	.98
1965	110.53	3.1	2.39	613.72	6.8	2.18	12,865.91	3.5	1.00

SOURCE: FPC, Privately Owned, 1973, and conversation with the FPC.

Table 38 —*Electric consumers, sales, and revenues*—1937-1973

Year	Ultimate electric consumers—thousands (average)				Kw.-hr. sales to ultimate consumers—millions				Revenues for sales to ultimate consumers—thousands				Other electric revenues	Total electric operating revenues	Total Kw.-hr. sold, including sales for resale—millions
	Residential[1]	Commercial and industrial[1]	Others	Total	Residential[1]	Commercial and industrial[1]	Others	Total	Residential[1]	Commercial and industrial[1]	Others	Total			
1937	18,925	3,631	986	23,542	14,822	65,202	11,988	92,012	$645,749	$1,105,092	$205,079	$1,955,920	$201,357	$2,157,277	120,835
1938	19,423	3,691	1,013	24,127	16,286	59,183	12,342	87,811	683,341	1,069,932	210,968	1,964,241	204,429	2,168,670	115,254
1939	19,789	3,770	1,239	24,798	17,359	66,972	12,982	97,314	705,608	1,130,970	223,725	2,060,303	211,058	2,271,361	125,470
1940	20,448	3,773	1,290	25,511	18,960	75,926	13,534	108,420	741,918	1,208,198	233,097	2,183,213	220,499	2,403,712	138,190
1941	21,143	3,775	1,358	26,276	20,548	90,669	14,310	125,527	780,635	1,341,669	244,048	2,366,352	255,128	2,621,480	159,360
1942	21,960	3,747	1,393	27,100	21,814	101,129	16,747	139,690	813,661	1,416,825	265,380	2,495,866	263,689	2,759,555	175,262
1943	22,097	3,594	1,403	27,094	23,260	116,417	21,608	161,285	846,080	1,537,789	305,787	2,689,656	281,055	2,970,711	199,424
1944	22,493	3,632	1,406	27,531	24,935	121,546	21,331	167,812	890,426	1,625,669	311,228	2,827,323	280,616	3,107,939	206,882
1945	22,952	3,733	1,457	28,142	27,177	116,472	20,601	164,250	943,910	1,632,414	312,222	2,888,546	282,911	3,171,457	203,541
1946	23,669	3,968	1,557	29,194	30,711	111,546	20,990	163,247	1,010,030	1,672,823	311,462	2,994,315	298,381	3,292,696	202,122
1947	24,664	4,230	1,733	30,627	34,713	127,809	22,235	184,847	1,090,767	1,902,266	336,618	3,329,651	368,247	3,697,898	230,198
1948	25,894	4,421	1,882	32,197	39,582	140,009	23,427	203,018	1,211,861	2,148,427	367,050	3,727,338	439,947	4,167,285	251,775
1949	27,074	4,571	2,056	33,701	44,296	138,957	25,044	208,297	1,332,219	2,226,317	400,010	3,958,546	423,303	4,381,849	256,438
1950	28,316	4,720	2,111	35,147	50,041	158,829	26,011	234,881	1,476,458	2,447,353	424,052	4,347,863	435,997	4,783,860	285,408
1951	29,591	4,785	2,214	36,590	56,530	179,260	27,383	263,173	1,634,443	2,691,601	458,779	4,784,823	453,436	5,238,259	314,073
1952	30,728	4,871	2,253	37,852	63,570	189,530	28,271	281,371	1,813,076	2,888,555	482,625	5,184,256	476,161	5,660,417	332,313
1953	31,956	4,967	2,196	39,119	70,806	208,178	28,690	308,674	2,007,624	3,169,300	515,345	5,692,359	474,898	6,167,257	359,955
1954	32,934	5,060	2,243	40,237	79,071	213,364	29,762	322,197	2,211,683	3,289,865	546,891	6,048,439	500,704	6,549,143	374,917
1955	34,015	5,149	2,301	41,465	87,424	252,151	31,327	370,902	2,411,488	3,656,144	582,848	6,650,480	548,566	7,199,046	431,875
1956	35,218	5,232	2,346	42,796	97,299	277,233	32,668	407,200	2,635,487	3,960,285	615,504	7,211,276	568,871	7,780,147	473,367
1957	36,324	5,298	2,297	43,919	106,599	288,416	34,778	429,793	2,852,810	4,220,508	643,695	7,717,112	591,463	8,308,575	496,929
1958	37,188	5,346	2,319	44,853	115,334	289,172	35,462	439,968	3,068,804	4,360,702	679,569	8,109,075	599,503	8,708,578	506,981
1959	38,266	5,438	2,329	46,033	125,765	323,143	38,551	487,459	3,327,266	4,783,716	753,380	8,864,362	633,302	9,497,664	558,560
1960	39,273	5,512	2,285	47,070	135,641	311,414	41,686	518,741	3,554,830	5,085,652	783,655	9,424,116	691,689	10,115,805	597,107
1961	41,769	5,887	169	47,825	152,899	367,703	24,329	544,931	3,977,408	5,488,069	446,002	9,911,479	754,995	10,666,474	631,279
1962	42,563	5,970	162	48,695	165,071	397,410	24,501	586,982	4,228,981	5,873,148	456,424	10,558,553	833,391	11,391,944	685,711
1963	43,323	6,066	166	49,555	177,591	424,617	26,263	628,471	4,465,108	6,191,108	481,599	11,137,815	880,659	12,018,474	732,894
1964	43,941	6,160	164	50,265	192,318	459,648	26,966	678,932	4,712,606	6,545,330	491,320	11,749,265	923,831	12,673,096	791,201
1965	44,825	6,246	173	51,244	206,993	494,747	28,687	730,427	4,954,412	6,929,223	521,841	12,405,476	994,574	13,400,050	853,826
1966	45,891	6,354	175	51,420	226,298	541,776	30,431	798,505	5,294,620	7,425,228	549,179	13,269,027	1,105,141	14,374,168	942,474
1967	46,733	6,395	181	53,309	243,959	571,349	33,735	849,043	5,625,554	7,827,956	593,551	14,047,061	1,177,870	15,224,931	1,004,762
1968	47,725	6,469	187	54,381	272,337	623,117	36,171	931,625	6,129,275	8,454,641	636,516	15,220,432	1,318,481	16,538,913	1,105,950
1969	48,671	6,528	189	55,388	303,081	672,145	30,556	1,015,682	6,716,512	9,110,391	689,557	16,516,460	1,506,444	18,022,904	1,215,801
1970	49,762	6,613	202	56,577	333,396	707,816	41,821	1,083,033	7,410,788	9,934,904	753,253	18,098,945	1,692,121	19,791,066	1,289,454
1971	50,850	6,734	208	57,792	357,943	747,321	44,119	1,149,383	8,202,951	11,253,756	843,517	20,300,224	1,931,650	22,321,874	1,358,452
1972	52,232	6,879	214	59,325	386,054	810,309	48,031	1,244,394	9,347,619	12,816,152	949,179	23,112,950	2,241,918	25,354,868	1,464,740
1973—	53,760	7,049	217	61,026	416,188	874,692	49,802	1,340,682	10,565,767	14,687,007	1,098,226	26,301,000	2,803,491	29,104,494	1,578,121

[1] Includes rural sales beginning with 1961. Rural classification discontinued in that year.

SOURCE: FPC, Privately Owned, 1973.

Table 39 —*Electric operating revenue relationships*— 1963-1973

Relationship	Year ended Dec.—										
	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963
Residential sales:											
Percent of total customers	88.1	88.0	88.0	87.9	87.9	87.8	87.7	87.5	87.5	87.4	87.4
Percent of total revenues	36.3	36.9	37.2	37.5	37.3	37.1	36.9	36.8	37.0	37.2	37.2
Percent of total kilowatt-hour sales	26.4	26.4	26.3	25.9	25.0	24.6	24.3	24.0	24.2	24.3	24.2
Average annual number of kilowatt-hours sold per customer	7,742	7,391	7,039	6,700	6,246	5,706	5,220	4,931	4,618	4,377	4,099
Average annual bill per customer	$196.54	$178.96	$163.08	$148.92	$137.99	$128.43	$120.38	$115.37	$110.53	$107.25	$103.07
Average revenue per kilowatt-hours sold, cents	2.54	2.42	2.32	2.22	2.21	2.25	2.31	2.34	2.39	2.45	2.51
Commercial sales:[1]											
Percent of total customers	11.1	11.1	11.2	11.2	11.3	11.4	11.5	11.7	11.7	11.8	11.8
Percent of total revenues	27.0	27.1	27.1	27.0	26.9	27.2	27.4	27.4	27.5	26.8	26.6
Percent of total kilowatt-hours sales	20.5	20.4	20.3	19.9	19.4	19.7	19.7	19.6	19.7	19.0	18.7
Average annual number of kilowatt-hours sold per customer	47,958	45,388	42,594	40,482	37,605	35,009	32,233	30,239	28,093	25,448	23,481
Average annual bill per customer	$1,158.12	$1,041.66	$937.47	$842.51	$773.22	$725.30	$679.94	$643.81	$613.72	$574.60	$549.63
Average revenue per kilowatt-hour sold, cents	2.41	2.29	2.20	2.08	2.06	2.07	2.11	2.13	2.18	2.26	2.34
Industrial sales:[1]											
Percent of total customers	0.5	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5
Percent of total revenues	23.6	23.4	23.3	23.2	23.7	23.9	24.0	24.3	24.3	24.9	24.9
Percent of total kilowatt-hour sales	35.0	34.9	34.7	35.0	36.0	36.7	37.2	37.9	38.2	39.1	39.3
Average annual number of kilowatt-hours sold per customer	1,863,970	1,819,878	1,737,985	1,695,774	1,669,728	1,581,801	1,484,617	1,443,952	1,291,746	1,219,650	1,179,158
Average annual bill per customer	$23,232.21	$21,172.31	$19,127.74	$17,254.42	$16,314.82	$15,399.55	$14,518.37	$14,126.36	$12,865.91	$12,425.65	$12,251.09
Average revenue per kilowatt-hour sold, cents	1.25	1.16	1.10	1.02	0.98	0.97	0.98	0.98	1.00	1.02	1.04

SOURCE: FPC, Privately Owned, 1973.

TABLE 40 --- *Publicly owned electric utilities*

COMPOSITE ELECTRIC OPERATING REVENUES, CUSTOMERS, AND SALES

Item	Total		Federal projects		Municipals[1]			
					Power Authority of the State of New York		Other municipals	
	1973	1972	1973	1972	1973	1972	1973	1972
Number of customers:								
Residential	6,970,417	6,914,469	6,785	6,424	-------	----------	6,963,632	6,908,045
Commercial and industrial	974,013	985,621	2,406	2,157	6	6	971,601	983,458
Other ultimate consumers	122,311	112,830	387	380	-------	----------	121,924	112,450
Total ultimate consumers	8,066,741	8,012,920	9,578	8,961	6	6	8,057,157	8,003,953
Resale	1,503	1,484	894	890	56	51	553	543
Total customers	8,068,244	8,014,404	10,472	9,851	62	57	8,057,710	8,004,496
Kilowatt-hour sales (millions):								
Residential	70,270	66,601	[illegible]	74	-------	----------	70,192	66,527
Commercial and industrial	166,668	155,694	61,055	54,789	4,775	4,149	100,838	96,756
Other ultimate consumers	14,830	14,678	7,096	7,189	-------	----------	7,734	7,489
Total sales to ultimate consumers	251,768	236,973	68,229	62,052	4,775	4,149	178,764	170,772
For resale	206,215	199,292	145,780	135,868	20,036	18,529	40,399	44,895
Total kilowatt-hour sales	457,983	436,265	214,009	197,920	24,811	22,678	219,163	215,667
Revenues (thousands):								
Residential	1,191,683	$1,085,167	1,025	$981	-------	----------	1,190,658	$1,084,186
Commercial and industrial	1,719,113	1,532,061	292,895	244,270	18,093	$15,488	1,408,125	1,272,303
Other ultimate consumers	159,538	149,843	24,786	24,412	-------	----------	134,752	125,431
Total revenues from ultimate consumers	3,070,334	2,767,071	318,706	269,663	18,093	15,488	2,733,535	2,481,920
From sales for resale	1,188,690	1,095,401	827,461	757,885	93,470	88,016	267,759	249,500
Total revenues from sales of electric energy	4,259,024	3,862,472	1,146,167	1,027,548	111,563	103,504	3,001,294	2,731,420
Other electric revenues	93,182	82,007	45,437	44,626	2,020	1,897	45,725	35,484
Total electric operating revenues	4,352,206	3,944,479	1,191,604	1,072,174	113,583	105,401	3,047,019	2,766,904

[1] The Federal Power Act defines the term municipality as "a city, county, irrigation district, drainage district, or other political subdivision or agency of a State competent under the laws thereof to carry on the business of developing, transmitting, or distributing power" (Pt. I, Sec. 3).

SOURCE: FPC, Publicly Owned, 1973.

TABLE 41 -*Municipal electric utilities* [1]

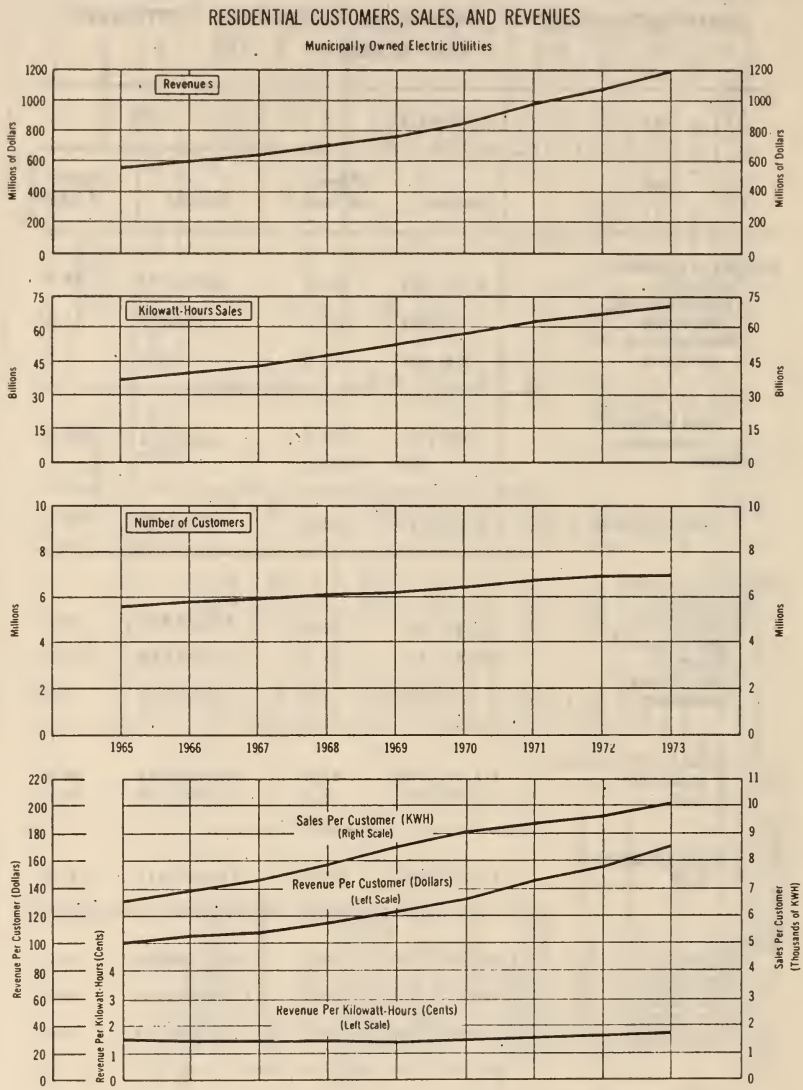
COMPOSITE ELECTRIC OPERATING REVENUES, CUSTOMERS AND SALES

Item	1973 Amount	1973 Percent of total	1972 Amount	1972 Percent of total
Number of customers:				
Residential	6,963,632	86.4	6,908,045	86.3
Commercial and industrial	971,601	12.1	983,458	12.3
Other ultimate consumers	121,924	1.5	112,450	1.4
Total ultimate consumers	8,057,157	100.0	8,003,953	100.0
Resale	553	-------	543	-------
Total customers	8,057,710	100.0	8,004,496	100.0
Kilowatt-hour sales (thousands):				
Residential	70,191,817	32.0	66,526,875	30.8
Commercial and industrial	100,837,433	46.0	96,756,192	44.9
Other ultimate consumers	7,734,502	3.6	7,489,106	3.5
Total sales to ultimate consumers	178,763,752	81.6	170,772,173	79.2
For resale	40,398,938	18.4	44,895,238	20.8
Total kilowatt-hour sales	219,162,690	100.0	215,667,411	100.0
Revenues:				
Residential	1,190,657,466	39.1	1,084,186,341	39.2
Commercial and industrial	1,408,125,327	46.2	1,272,303,436	46.0
Other ultimate consumers	134,752,080	4.4	125,430,376	4.5
Total revenues from ultimate consumers	2,733,534,873	89.7	2,481,920,153	89.7
From sales for resale	267,758,702	8.8	249,499,474	9.0
Total revenues from sales of electric energy	3,001,293,575	98.5	2,731,419,627	98.7
Other electric revenues	45,725,004	1.5	35,484,137	1.3
Total electric operating revenues	3,047,018,579	100.0	2,766,903,764	100.0

[1] Exclusive of the Power Authority of the State of New York.

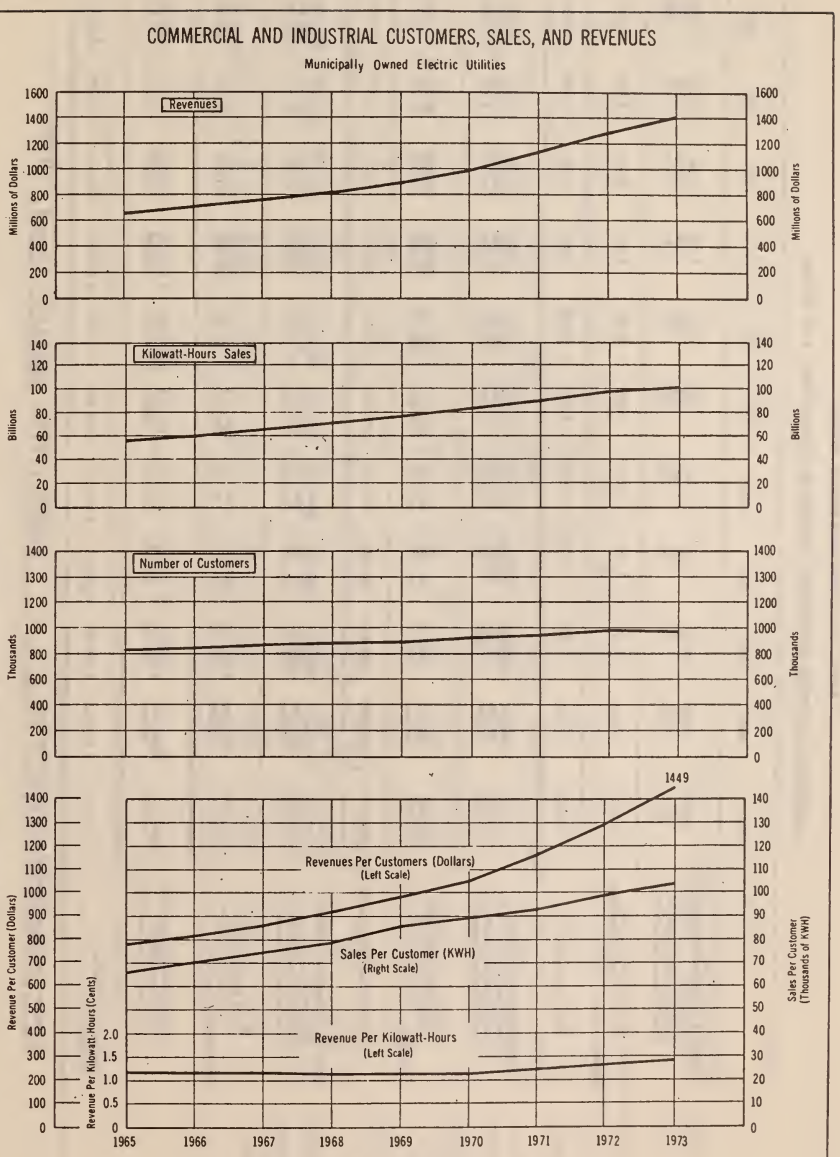
SOURCE: FPC, Publicly Owned, 1973.

FIGURE 7



SOURCE: FPC, Publicly Owned, 1973.

FIGURE 8



SOURCE: FPC, Publicly Owned, 1973.

TABLE 42 —*Municipal electric utilities* [1]

COMPOSITE ELECTRIC OPERATING REVENUES, CUSTOMERS, AND SALES

	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963
Number of customers (thousands):											
Residential	6,964	6,906	6,707	6,410	6,212	6,107	5,942	5,759	5,584	5,338	5,132
Commercial and industrial	971	983	963	935	904	893	880	865	840	809	778
Other ultimate consumers	122	113	89	74	67	63	60	54	58	53	55
Total ultimate consumers	8,057	8,004	7,759	7,419	7,183	7,063	6,882	6,678	6,482	6,200	5,965
Resale	1	1	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]	[2]
Total customers	8,058	8,005	7,759	7,419	7,183	7,063	6,882	6,678	6,482	6,200	5,965
Kilowatt-hour sales (millions):											
Residential	70,192	66,527	62,901	57,789	53,087	48,117	43,481	40,350	37,045	34,390	31,407
Commercial and industrial	100,838	96,756	89,345	83,828	77,484	71,193	65,462	61,061	55,745	50,702	46,019
Other ultimate consumers	7,734	7,489	7,262	6,720	6,277	6,064	5,533	5,176	4,695	4,481	4,321
Total sales to ultimate consumers	178,764	170,772	159,508	148,335	136,848	125,374	114,476	106,587	97,485	89,573	81,747
For resale	40,399	44,895	43,112	41,426	40,122	36,680	28,171	25,988	24,149	21,768	18,504
Total kilowatt-hour sales	219,163	215,667	202,620	189,761	176,070	162,054	142,647	132,575	121,634	111,341	100,251
Revenues (thousands of dollars):											
Residential	$1,190,658	$1,084,186	$982,361	$851,830	$769,704	$707,928	$647,147	$605,446	$565,438	$536,771	$494,636
Commercial and industrial	1,408,125	1,272,303	1,127,030	984,429	889,149	818,996	761,739	708,612	658,175	605,875	559,277
Other ultimate consumers	134,752	125,431	115,312	102,169	91,858	87,950	81,230	76,074	72,351	68,537	65,010
Total revenues from ultimate consumers	2,733,535	2,481,920	2,224,703	1,938,428	1,750,711	1,614,874	1,490,116	1,390,132	1,295,964	1,211,183	1,118,923
From sales for resale	267,759	249,500	210,345	184,470	170,408	153,240	128,507	124,607	120,589	99,928	93,388
Total revenues from sales of electric energy	3,001,294	2,731,420	2,435,048	2,122,898	1,921,119	1,768,114	1,618,623	1,514,739	1,416,553	1,311,111	1,212,311
Other electric revenues	47,725	35,484	32,216	30,576	28,154	26,824	25,209	22,189	22,598	20,535	18,600
Total electric operating revenues	3,047,019	2,766,904	2,467,264	2,153,474	1,949,273	1,794,938	1,643,832	1,536,928	1,439,151	1,331,646	1,230,911

[1] Exclusive of the Power Authority of the State of New York.
[2] Less than 500.

SOURCE: FPC, Publicly Owned, 1973.

TABLE 43—*Municipal electric utilities* [1]

ELECTRIC OPERATING REVENUE RELATIONSHIPS

Relationship	Year										
	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963
Residential sales:											
Percent of total customers	86.4	86.3	86.4	86.4	86.5	86.4	86.3	86.2	86.1	86.1	86.0
Percent of total revenues	39.1	39.2	39.8	38.5	39.5	39.4	39.4	39.4	39.3	40.3	40.1
Percent of total kilowatt-hour sales	32.0	30.8	31.0	30.5	30.0	29.7	30.5	30.4	30.5	30.9	31.3
Average annual number of kilowatt-hours sold per customer	10,080	9,630	9,378	9,015	8,546	7,880	7,317	7,007	6,634	6,442	6,120
Average annual bill per customer	$170.98	$156.95	$146.47	$132.89	$123.90	$115.93	$108.90	$105.13	$101.26	$100.56	$96.38
Average revenue per kilowatt-hour sold (cents)	1.70	1.63	1.56	1.47	1.45	1.47	1.49	1.50	1.53	1.56	1.57
Commercial and industrial sales:											
Percent of total customers	12.1	12.3	12.4	12.6	12.6	12.6	12.8	13.0	12.9	13.1	13.0
Percent of total revenues	46.2	46.0	45.7	45.7	45.6	45.6	46.3	46.1	45.7	45.5	45.4
Percent of total kilowatt-hour sales	46.0	44.9	44.1	44.2	43.8	43.9	45.9	46.1	45.8	45.5	45.9
Average annual number of kilowatt-hours sold per customer	103,785	98,384	92,833	89,636	85,683	79,687	74,373	70,557	66,396	62,635	59,158
Average annual bill per customer	$1,449.28	$1,294.31	$1,171.03	$1,052.67	$983.24	$916.71	$865.43	$818.81	$783.93	$748.47	$178.97
Average revenue per kilowatt-hour sold (cents)	1.40	1.31	1.26	1.17	1.15	1.15	1.16	1.16	1.18	1.19	1.22

[1] Exclusive of the Power Authority of the State of New York.

SOURCE: FPC, Publicly Owned, 1973.

TABLE 44—*Municipal electric utilities* [1]

ELECTRIC CONSUMERS, SALES, AND REVENUES

Year	Ultimate electric consumers—thousands (average)				Kw.-hr. sales to ultimate consumers—millions				Revenues from sales to ultimate consumers—thousands				Other electric revenues	Total electric operating revenues	Total kw.-hr. sold, including sales for resale—millions
	Residential	Commercial and industrial	Other	Total	Residential	Commercial and industrial	Other	Total	Residential	Commercial and industrial	Other	Total			
1945	2,203	388	94	2,685	3,831	8,711	2,046	14,588	$88,804	$112,100	$28,789	$229,693	$16,869	$246,626	17,071
1947	2,303	419	98	2,820	4,410	9,731	2,199	16,340	97,737	125,195	30,049	253,981	20,565	274,547	18,943
1948	2,461	453	104	3,008	5,217	10,935	2,237	18,389	110,330	142,294	32,889	285,513	26,049	311,562	21,547
1949	2,656	482	112	3,250	5,093	11,409	2,273	19,775	124,944	163,958	35,125	314,024	29,802	343,826	23,704
1950	2,787	493	118	3,398	7,012	12,388	2,408	21,814	139,505	168,371	37,002	341,878	28,788	370,666	25,576
1951	2,996	518	119	3,633	8,232	14,355	2,566	25,153	156,437	185,630	38,955	381,022	29,494	410,516	28,757
1952	3,118	525	133	3,775	9,388	15,862	2,717	27,967	172,970	201,655	41,738	416,363	33,536	449,899	31,705
1953	3,237	532	133	3,902	10,310	18,173	3,025	31,508	186,853	220,432	45,931	453,216	33,279	486,495	35,314
1954	3,327	538	144	4,009	11,721	19,277	3,252	34,260	204,608	234,021	49,073	487,702	34,480	522,182	38,085
1955	3,408	552	144	4,104	13,031	21,156	3,679	37,866	220,286	252,644	52,080	524,910	37,325	562,235	42,391
1956	3,536	588	148	4,242	14,489	23,325	3,894	41,708	239,257	274,219	56,025	569,501	42,700	612,201	47,625
1957	3,629	555	164	4,348	16,481	24,493	3,967	43,941	255,335	292,324	58,465	606,125	47,541	653,666	50,765
1958	3,698	572	166	4,433	17,097	25,016	4,210	46,323	277,393	305,604	65,740	648,937	52,420	701,357	53,415
1959	3,817	691	161	4,569	18,606	27,891	4,493	50,592	295,168	331,589	67,952	695,699	59,787	755,486	58,668
1960	3,921	604	164	4,689	20,422	29,882	4,592	54,936	323,371	364,887	72,145	760,403	60,459	820,862	63,296
1961 new series*	4,252	641	44	4,937	23,526	34,156	3,635	51,317	378,140	417,650	52,802	845,592	71,212	916,804	71,314
1962 new series*	4,896	742	55	5,693	28,477	42,067	3,901	74,465	467,241	511,575	58,726	1,027,542	88,605	1,116,147	91,326
1963	5,132	778	55	5,965	31,407	45,019	4,321	81,747	494,636	559,277	65,010	1,118,923	111,988	1,230,911	100,250
1964	6,338	809	53	6,200	34,390	50,702	4,481	89,573	536,771	604,875	58,537	1,211,183	120,463	1,331,646	111,341
1965	5,584	840	58	6,482	37,045	55,745	4,695	97,485	565,438	658,176	72,351	1,295,964	143,187	1,439,151	121,634
1966	5,789	865	54	6,678	40,350	61,061	5,178	106,587	606,445	708,612	76,074	1,390,132	146,796	1,536,928	132,575
1967	5,942	880	60	6,882	43,481	65,452	5,533	114,475	647,147	761,739	81,230	1,490,116	153,716	1,643,832	142,847
1968	6,107	893	53	7,053	48,108	71,193	6,073	125,374	707,703	818,997	88,174	1,614,874	180,064	1,794,938	162,054
1969	6,212	904	67	7,183	53,087	77,484	6,277	136,848	769,704	889,149	91,858	1,750,711	198,562	1,949,273	176,970
1970	6,409	865	144	7,418	57,789	83,825	6,720	148,335	851,830	984,429	102,169	1,938,428	215,047	2,153,474	189,761
1971	6,707	963	89	7,769	62,901	89,348	7,262	159,508	982,381	1,127,030	115,312	2,224,703	242,561	2,467,264	202,620
1972	6,906	963	113	8,004	66,527	96,756	7,489	170,772	1,084,186	1,272,303	125,431	2,481,920	284,984	2,766,904	219,687
1973	6,964	971	122	8,057	70,192	100,838	7,734	178,764	1,190,658	1,408,125	134,752	2,733,535	313,484	3,047,019	219,183

[1] Exclusive of the Power Authority of the State of New York.

* New series refers to an increase in the number of companies reporting to the FPC.

SOURCE: FPC, Publicly Owned, 1973.

TABLE 45—*Sales and revenues per customer, revenues per kilowatt-hour sold, Tennessee Valley area, Pacific Northwest area, other areas*

Year	Tennessee Valley area			Pacific Northwest area			Other areas		
	Average sales per customer (kilowatt-hours)	Average revenues per customer	Average revenues per kilowatt-hour (cents)	Average sales per customer (kilowatt-hours)	Average revenues per customer	Average revenues per kilowatt-hour (cents)	Average sales per customer (kilowatt-hours)	Average revenues per customer	Average revenues per kilowatt-hour (cents)
RESIDENTIAL SALES									
1946	2,200	$37.82	1.72	3,888	$51.11	1.31	1,409	$39.84	2.81
1947	2,532	40.64	1.61	4,266	54.24	1.27	1,519	41.41	2.73
1948	2,904	44.20	1.62	4,749	57.92	1.22	1,619	43.44	2.68
1949	3,246	47.46	1.46	4,912	60.73	1.24	1,709	45.36	2.65
1950	3,728	51.83	1.39	5,329	63.92	1.20	1,798	47.43	2.64
1951	4,366	56.89	1.30	6,262	72.06	1.16	1,897	49.36	2.60
1952	4,898	59.61	1.27	9,157	70.16	1.14	2,027	51.72	2.55
1953	5,031	62.83	1.24	6,486	71.98	1.11	2,149	54.14	2.52
1954	5,623	66.53	1.19	7,223	76.94	1.07	2,339	57.34	2.45
1955	6,133	70.67	1.15	7,920	82.43	1.04	2,483	59.74	2.41
1956	6,751	74.69	1.11	8,443	86.02	1.02	2,626	62.43	2.38
1957	7,032	78.53	1.09	8,727	87.62	1.00	2,760	66.53	2.38
1958	8,218	84.76	1.03	9,537	96.57	1.00	2,966	70.28	2.37
1959	8,503	86.11	1.01	9,702	96.63	.99	3,066	72.10	2.34
1960	9,449	95.83	1.01	10,309	100.61	.97	3,273	76.04	2.32
1961 new series*	9,765	96.44	.99	10,818	101.96	.97	3,849	83.85	2.30
1962 new series*	10,126	98.23	.97	11,282	107.69	.95	3,911	89.93	2.30
1963	10,981	103.98	.96	11,638	110.35	.95	4,153	92.47	2.23
1964	11,251	104.96	.93	12,412	115.80	.93	4,273	91.17	2.22
1965	11,596	103.42	.89	12,483	114.87	.92	4,588	98.72	2.16
1966	12,221	106.98	.88	12,895	116.99	.91	4,901	102.93	2.10
1967	12,424	108.50	.87	13,055	116.58	.89	5,342	107.93	2.02
1968	13,375	122.36	.91	13,961	123.15	.88	6,706	113.20	1.98
1969	14,589	136.19	.93	15,438	134.38	.87	6,090	119.41	1.97
1970	15,461	157.79	1.02	16,868	136.76	.87	6,316	126.62	1.94
1971	15,308	183.17	1.20	16,990	147.86	.86	6,918	137.50	1.99
1972	16,002	187.03	1.26	17,004	163.72	.90	7,223	160.43	2.05
1973	15,915	204.22	1.28	16,550	149.77	.90	7,785	166.32	2.14
COMMERCIAL AND INDUSTRIAL SALES									
1946	32,154	$310.08	0.96	37,387	$310.70	0.83	19,068	$283.10	1.46
1947	34,939	327.87	.94	38,300	321.16	.84	19,351	293.59	1.62
1948	37,307	347.96	.93	39,482	330.81	.84	19,817	308.90	1.54
1949	38,228	356.75	.93	37,666	342.82	.91	19,326	311.82	1.61
1950	39,316	368.77	.94	41,731	362.97	.87	20,161	325.31	1.61
1951	43,195	401.49	.89	42,445	371.70	.88	21,923	347.86	1.58
1952	48,218	429.31	.89	50,006	434.26	.87	23,709	367.94	1.55
1953	51,934	464.52	.89	56,696	483.44	.72	25,637	394.14	1.54
1954	54,952	494.84	.90	70,937	606.86	.71	28,624	412.05	1.44
1955	59,737	516.34	.87	78,284	640.74	.72	28,458	432.96	1.52
1956	64,188	546.38	.86	82,091	688.94	.71	31,444	486.64	1.46
1957	67,306	572.14	.85	81,431	695.61	.73	32,971	494.90	1.50
1958	65,706	582.17	.89	82,914	611.81	.74	33,773	613.76	1.62
1959	70,531	606.17	.86	86,016	633.49	.72	35,788	640.86	1.51
1960	75,367	671.64	.89	92,432	666.23	.72	38,131	683.04	1.83
1961 new series*	74,509	661.93	.89	99,142	685.00	.69	42,255	646.53	1.53
1962 new series*	77,010	671.98	.87	113,425	713.12	.63	44,845	689.21	1.64
1963	80,917	698.86	.86	119,279	782.14	.66	47,062	715.47	1.52
1964	84,075	702.76	.84	126,868	808.67	.64	50,162	750.54	1.50
1965	91,832	697.51	.76	121,161	794.29	.66	54,634	800.22	1.46
1966	98,664	737.20	.75	128,045	817.37	.64	57,916	833.38	1.44
1967	104,421	785.01	.75	131,022	845.63	.65	62,002	883.57	1.43
1968	109,925	856.02	.76	136,256	872.86	.64	67,157	933.89	1.39
1969	119,461	947.63	.79	141,710	914.05	.64	72,017	998.88	1.39
1970	127,405	1,106.58	.87	142,153	927.44	.65	75,836	1,057.21	1.39
1971	127,915	1,313.10	1.03	143,206	967.08	.69	79,818	1,184.21	1.46
1972	137,616	1,438.72	1.04	150,422	1,037.89	.69	84,445	1,264.97	1.53
1973	144,756	1,571.60	1.09	156,703	1,080.29	.69	89,589	1,466.74	1.64

* New series refers to an increase in the number of companies reporting to the FPC.

SOURCE: FPC, Publicly Owned, 1973.

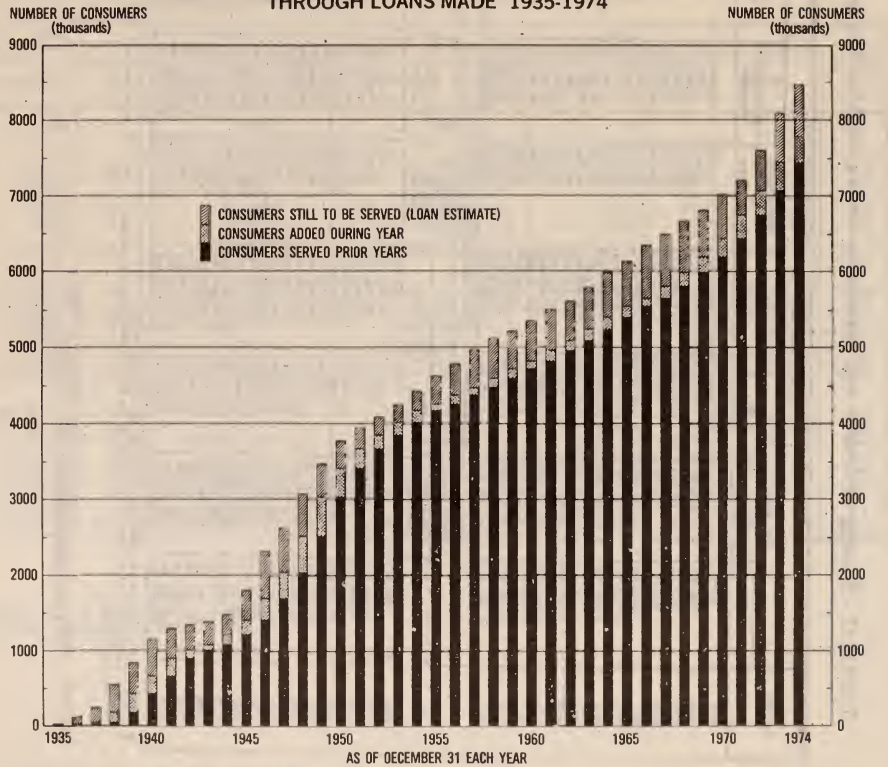
TABLE 46—Number of REA borrowers with energized systems, number of full-time employees, miles energized, and consumers served

As of Dec. 31	NUMBER OF BORROWERS			Number of full-time employees Active borrowers	MILES ENERGIZED			CONSUMERS SERVED		
	Total	Active	Loan re-paid		Total	Active borrowers	Loan repaid borrowers	Total	Active borrowers	Loan repaid borrowers
1935	2	2	0	-	0	0	0	0	0	0
1936	29	29	0	-	3,000	3,000	0	7,508	7,508	0
1937	126	126	0	-	16,500	16,500	0	43,878	43,878	0
1938	350	349	1	-	67,409	67,317	92	176,382	176,016	366
1939	548	547	1	-	181,359	181,267	92	435,566	435,200	366
1940	685	684	1	-	267,846	267,754	92	674,495	674,129	366
1941	773	770	3	-	348,062	347,338	724	902,266	899,667	2,599
1942	803	798	5	-	378,015	377,033	982	1,012,284	1,008,081	4,203
1943	811	805	6	-	390,058	387,686	2,372	1,087,801	1,077,198	10,603
1944	826	815	11	-	410,471	406,855	3,616	1,216,798	1,202,116	14,682
1945	848	835	13	-	449,579	445,829	3,750	1,408,918	1,393,865	15,053
1946	869	851	18	-	506,838	502,664	4,174	1,683,901	1,667,105	16,796
1947	911	887	24	-	603,064	598,169	4,895	2,046,095	2,025,482	20,613
1948	952	926	26	-	759,494	754,266	5,229	2,518,450	2,495,940	22,510
1949	995	967	28	-	943,385	937,733	5,652	3,040,425	3,016,796	23,629
1950	1,007	977	30	-	1,088,777	1,082,938	5,839	3,413,407	3,388,914	24,493
1951	1,016	982	34	-	1,178,515	1,171,914	6,601	3,665,966	3,635,729	30,237
1952	1,020	982	38	-	1,244,645	1,236,764	7,881	3,858,396	3,823,824	34,572
1953	1,022	981	41	-	1,297,264	1,287,803	9,461	4,024,826	3,981,905	42,921
1954	1,024	982	42	-	1,332,937	1,323,414	9,523	4,174,346	4,131,235	43,111
1955	1,026	982	44	-	1,361,605	1,351,210	10,395	4,251,250	4,204,347	46,903
1956	1,026	978	48	-	1,382,737	1,370,419	12,318	4,361,896	4,304,577	57,319
1957	1,030	980	50	-	1,405,327	1,391,906	13,421	4,466,444	4,402,545	63,899
1958	1,030	974	56	-	1,421,441	1,409,129	15,312	4,596,270	4,522,020	74,250
1959	1,032	976	56	-	1,445,835	1,430,973	14,862	4,721,630	4,650,887	70,743
1960	1,038	981	57	-	1,465,315	1,450,113	15,202	4,825,802	4,753,552	72,250
1961	1,038	981	57	28,084	1,483,021	1,467,819	15,202	4,955,642	4,883,392	72,250
1962	1,042	982	60	29,046	1,504,228	1,486,442	17,786	5,094,953	4,990,158	104,795
1963	1,046	987	59	29,816	1,526,812	1,509,477	17,335	5,237,912	5,134,700	103,212
1964	1,051	991	60	30,799	1,547,143	1,525,556	21,587	5,386,088	5,268,536	117,552
1965	1,052	991	61	31,702	1,566,772	1,544,575	22,197	5,541,478	5,421,278	120,200
1966	1,051	988	63	32,597	1,586,502	1,561,456	25,046	5,652,844	5,514,818	138,026
1967	1,052	989	63	33,457	1,606,497	1,581,451	25,046	5,806,017	5,667,991	138,026
1968	1,052	987	65	34,563	1,627,145	1,601,201	26,244	5,986,140	5,838,678	147,462
1969	1,049	983	66	35,771	1,650,240	1,623,948	26,292	6,196,967	6,049,343	147,624
1970	1,050	983	67	37,013	1,676,001	1,649,045	26,956	6,442,332	6,292,088	150,244
1971	1,048	981	67	38,197	1,700,488	1,673,949	26,399	6,747,698	6,599,151	148,547
1972	1,047	981	66	39,779	1,732,[illegible]	1,707,047	25,498	7,076,249	6,931,983	144,266
1973	1,046	980	66	41,422	1,766,701	1,741,203	25,498	7,457,123	7,312,857	144,266
1974	1,047	981	66	42,908	1,797,525	1,772,027	25,498	7,767,813	7,623,547	144,266

SOURCE: REA, Annual Statistical Report, 1974.

FIGURE 9

NUMBER OF CONSUMERS SERVED AND TO BE SERVED BY REA BORROWERS THROUGH LOANS MADE 1935-1974



SOURCE: REA, Annual Statistical Report, 1974.

TABLE 47 – Energy statistics and revenues – Active REA borrowers [1]

Calendar year	KILOWATT-HOUR SALES (IN THOUSANDS)						
	POWER SUPPLY			DISTRIBUTION			Total[2] sales
	Total	To REA borrowers	To others	Total	To REA borrowers	To ultimate consumers	
1941	41,857	-	-	682,528	-	-	724,385
1943	410,489	85,274	325,215	1,268,892	21,641	1,247,251	1,572,466
1945	424,927	151,648	273,279	1,711,397	33,947	1,677,450	1,950,729
1947	341,812	261,065	80,747	3,056,478	81,125	2,975,353	3,056,100
1949	741,997	542,745	199,252	5,485,474	120,403	5,365,071	5,564,323
1950	899,117	778,794	120,323	6,879,618	116,002	6,763,616	6,883,939
1952	1,513,881	1,258,192	255,689	10,020,477	148,303	9,872,174	10,127,863
1954	2,949,806	2,480,001	469,805	13,558,371	199,045	13,359,326	13,829,131
1956	4,773,488	3,616,281	1,157,207	17,133,743	93,536	17,040,207	18,197,414
1958	5,541,590	4,491,053	1,050,537	20,923,566	72,334	20,851,232	21,901,769
1960	7,148,723	5,940,508	1,208,215	26,187,701	127,291	26,060,410	27,268,625
1962	9,308,877	8,122,536	1,186,341	30,834,561	140,769	30,693,792	31,880,133
1964	12,986,152	11,082,462	1,903,690	38,277,307	344,143	37,933,164	39,836,854
1966	19,285,288	16,467,837	2,817,451	45,926,845	305,240	45,621,605	48,439,056
1968	25,820,433	22,565,324	3,255,109	55,447,120	398,296	55,048,824	58,303,933
1969	30,632,172	25,575,295	5,056,877	61,828,908	464,764	61,364,144	66,421,021
1970	38,148,138	30,699,764	7,448,374	69,104,503	543,588	68,560,915	76,009,289
1971	45,879,237	37,079,121	8,800,116	76,142,518	659,798	75,482,720	84,282,836
1972	50,298,907	42,323,798	7,975,109	85,307,486	748,432	84,559,054	92,534,163
1973	55,149,727	47,961,209	7,188,518	94,208,026	708,246	93,499,780	100,688,298
1974	61,891,191	56,351,537	5,539,654	100,839,785	688,632	100,151,153	105,690,807

Calendar year	ELECTRIC OPERATING REVENUES AND PATRONAGE CAPITAL						
	POWER SUPPLY			DISTRIBUTION			Total[2]
	Total	From REA borrowers	From others	Total	From REA borrowers	From ultimate consumers	
1941	$ 516,142	$ -	$ -	$ 34,505,929	$ -	$ -	$ 35,022,071
1943	2,902,503	993,803	1,908,700	52,685,111	241,030	52,444,081	54,352,781
1945	3,752,563	1,779,286	1,973,277	69,854,720	362,447	69,492,273	71,465,550
1947	4,355,379	3,608,440	746,939	110,642,727	868,481	109,774,246	110,521,185
1949	9,605,221	7,859,490	1,745,731	187,423,372	1,385,119	186,038,253	187,783,984
1950	11,936,193	10,845,616	1,090,577	229,437,034	1,330,679	228,106,355	229,196,932
1952	17,893,955	16,073,929	1,820,026	305,680,838	1,615,549	304,065,289	305,885,315
1954	31,224,961	27,725,286	3,499,675	381,617,376	1,972,579	379,644,797	383,144,472
1956	46,529,011	36,735,780	9,793,231	451,130,686	736,126	450,394,560	460,187,791
1958	55,969,938	45,754,371	10,215,567	515,322,748	567,328	514,755,420	524,970,987
1960	68,329,327	56,476,526	11,852,801	604,459,115	1,079,621	603,379,494	615,232,295
1962	79,900,318	69,687,178	10,213,140	688,405,700	1,312,939	687,092,761	697,305,901
1964	94,567,921	84,561,017	10,006,904	793,981,288	1,556,723	792,424,565	802,431,469
1966	138,131,236	121,644,790	16,486,446	897,076,447	2,017,538	895,058,909	911,545,355
1968	177,669,247	157,958,560	19,710,687	1,042,687,941	2,712,448	1,039,975,493	1,059,686,180
1969	201,169,446	176,457,868	24,711,578	1,146,446,011	2,851,090	1,143,594,921	1,168,306,499
1970	280,466,856	235,686,730	44,780,126	1,267,945,441	3,261,341	1,264,684,100	1,309,464,226
1971	351,170,156	297,689,338	53,480,818	1,432,430,234	3,657,523	1,428,772,711	1,482,253,529
1972	419,812,399	361,289,697	58,522,702	1,626,375,488	4,180,038	1,622,195,450	1,680,718,152
1973	496,813,469	438,969,985	57,843,484	1,858,609,785	3,951,217	1,854,658,568	1,912,502,052
1974	671,272,044	610,102,575	61,169,469	2,259,483,305	4,216,672	2,255,266,633	2,316,436,102

1. Beginning 1965, includes kWh interchange (net) and kWh wheeling (net).
2. Excludes energy sales and revenues of power sold by one REA borrower to another, except for 1941, for which year such sales and revenues are included.

SOURCE: REA, Annual Statistical Report, 1974.

TABLE 48

COMPOSITE REVENUES AND PATRONAGE CAPITAL, NUMBER OF CONSUMERS, AND MEGAWATT-HOUR SALES REPORTED BY REA BORROWERS OPERATING DISTRIBUTION SYSTEMS
CALENDAR YEARS 1970 - 1974

Item	1970		1971		1972		1973		1974	
	Amount	Percent of total	Amount	Percent of total	Amount	Percent of total	Amount	Percent of total	Amount	Percent of total
Number of borrowers reporting	929		928		930		928		927	
Average number of consumers served										
Residential service (farm & nonfarm)	5,443,703	90.7	5,688,021	90.7	5,993,845	90.8	6,310,483	90.9	6,604,401	90.8
Commercial & industrial, small	371,396	6.2	387,490	6.2	405,149	6.1	424,514	6.1	444,209	6.1
Commercial & industrial, large	24,286	0.4	26,631	0.4	28,044	0.4	30,391	0.4	33,303	0.5
Irrigation	75,443	1.3	80,543	1.3	84,599	1.3	88,017	1.3	97,964	1.4
Other electric service	85,319	1.4	88,961	1.4	88,943	1.4	89,967	1.3	90,571	1.2
To others for resale	198	*	200	*	215	*	219	*	226	*
Total	6,000,345	100.0	6,271,846	100.0	6,600,795	100.0	6,943,591	100.0	7,270,674	100.0
Kilowatt-hour sales (thousands)										
Residential service (farm & nonfarm)	44,857,083	65.8	48,543,060	64.6	54,207,219	64.4	60,035,300	64.3	63,629,695	63.5
Commercial & industrial, small	5,810,923	8.5	6,259,867	8.3	6,862,002	8.1	7,331,466	7.9	7,550,182	7.5
Commercial & industrial, large	13,336,082	19.6	15,583,648	20.8	18,152,500	21.5	20,771,632	22.2	22,701,516	22.7
Irrigation	2,008,644	2.9	2,259,120	3.0	2,234,562	2.7	2,310,268	2.5	3,382,835	3.4
Other electric service	1,022,737	1.5	1,164,745	1.6	1,287,245	1.5	1,356,162	1.4	1,330,582	1.3
To others for resale	1,189,582	1.7	1,307,864	1.7	1,480,420	1.8	1,556,873	1.7	1,632,392	1.6
Total	68,225,051	100.0	75,118,304	100.0	84,223,948	100.0	93,361,701	100.0	100,227,202	100.0
Revenues and patronage capital										
Residential service (farm & nonfarm)	$ 880,001,704	70.3	$ 988,153,480	69.9	$ 1,124,630,935	70.0	$ 1,290,226,151	70.1	$1,550,910,104	69.4
Commercial & industrial, small	125,635,649	10.0	138,954,487	9.8	154,688,881	9.7	172,329,800	9.3	199,610,164	8.9
Commercial & industrial, large	165,760,260	13.2	191,565,687	13.6	222,196,260	13.8	263,826,897	14.3	336,723,279	15.1
Irrigation	30,662,782	2.5	35,141,536	2.5	36,182,236	2.3	39,815,398	2.2	61,487,503	2.7
Other electric service	20,314,589	1.6	25,645,038	1.8	29,248,557	1.8	32,045,619	1.7	35,582,264	1.6
To others for resale	10,805,701	0.9	12,178,687	0.9	14,408,551	0.9	16,082,879	0.9	19,408,959	0.9
Total from sales of electric energy	1,233,180,685	98.5	1,391,638,915	98.5	1,581,355,420	98.5	1,814,326,744	98.5	2,203,722,273	98.6
Other operating revenue	19,013,756	1.5	21,013,319	1.5	24,552,068	1.5	27,179,042	1.5	30,589,411	1.4
Total operating revenue	$1,252,194,441	100.0	$ 1,412,652,234	100.0	$ 1,605,907,488	100.0	$ 1,841,505,786	100.0	$2,234,311,684	100.0

* Less than 0.05 percent.

SOURCE: REA, Annual Statistical Report, 1974.

TABLE 49: AVERAGE MONTHLY KILOWATT-HOUR CONSUMPTION AND AVERAGE REVENUE AND PATRONAGE CAPITAL PER KILOWATT-HOUR, RESIDENTIAL CONSUMERS OF REA DISTRIBUTION BORROWERS 1948 - 1974

Calendar year	Average monthly kWh	Average revenue and patronage capital per kWh	Calendar year	Average monthly kWh	Average revenue and patronage capital per kWh
1948	121	3.92¢	1962	401	2.39¢
1949	134	3.77	1963	425	2.33
1950	147	3.63	1964	456	2.23
1951	166	3.44	1965	479	2.17
1952	182	3.35	1966	515	2.10
1953	201	3.22	1967	543	2.06
1954	223	3.09	1968	593	2.00
1955	242	2.98	1969	643	1.97
1956	263	2.87	1970	687	1.96
1957	283	2.77	1971	711	2.04
1958	311	2.65	1972	754	2.07
1959	334	2.57	1973	793	2.15
1960	357	2.49	1974	803	2.44
1961	375	2.44			

SOURCE: REA, Annual Statistical Report, 1974.

TABLE 50

COMPOSITE REVENUES AND PATRONAGE CAPITAL, NUMBER OF CONSUMERS, AND MEGAWATT-HOUR SALES
REPORTED BY REA BORROWERS OPERATING DISTRIBUTION SYSTEMS, BY STATES
CALENDAR YEAR 1974

State	No. of borr.	AVERAGE NUMBER OF CONSUMERS SERVED							KILOWATT-HOUR SALES (THOUSANDS)						
		Residential service farm and nonfarm	Commercial and industrial small	Com. and ind. large	Irrigation	Other electric service	To others for resale	Total	Residential service farm and nonfarm	Commercial and industrial small	Commercial and industrial large	Irrigation	Other electric service	To others for resale	Total
UNITED STATES	927	6,634,431	444,209	33,303	97,964	90,571	226	7,270,674	63,629,695	7,550,182	22,701,516	3,382,835	1,330,582	1,632,392	100,227,202
ALABAMA	23	264,264	14,628	1,191	680	4,192		284,955	2,820,980	288,234	445,582	2,113	50,079		3,606,988
ALASKA	12	55,223	6,049	555	8	867	2	62,504	561,213	194,387	260,722	97	33,407	139,150	1,190,976
ARIZONA	9	39,189	5,163	315	3,009	950	3	48,629	268,615	92,999	453,456	274,373	12,024	19,273	1,120,740
ARKANSAS	18	197,516	10,409	817	2,944	4,183		215,869	1,563,521	159,336	414,194	61,934	30,999		2,229,984
CALIFORNIA	4	7,343	1,354	49	348	136		9,930	69,392	18,748	27,033	19,571	1,744		134,528
COLORADO	22	121,335	14,719	1,226	8,976	1,772	13	148,041	867,222	250,222	541,924	490,082	33,776	16,030	2,108,956
CONNECTICUT															
DELAWARE	1	22,594	459	41		200		23,294	189,757	6,426	15,703		936		212,821
FLORIDA	15	236,370	17,035	732	2,454	3,143	3	259,737	2,051,420	293,466	369,414	44,032	40,959	66,590	2,856,881
GEORGIA	42	463,943	21,262	1,625	168	7,404		494,402	4,625,948	377,669	562,635	5,183	73,842		5,645,277
HAWAII															
IDAHO	9	24,171	2,303	169	1,562	267	1	28,473	292,719	53,153	59,694	151,074	8,481	2,065	562,177
ILLINOIS	27	163,019	7,739	1,051	105	1,402		173,515	1,606,605	125,063	430,742	2,624	8,891		2,173,925
INDIANA	41	245,184	6,598	1,265	22	1,604		254,673	2,636,405	112,277	411,958	753	42,481		3,203,874
IOWA	48	150,262	3,298	469	89	1,190	20	155,319	1,941,544	50,811	193,322	1,205	13,052	95,928	2,295,862
KANSAS	36	97,867	11,395	1,197	3,280	2,657	12	116,588	856,735	187,131	483,430	90,057	29,407	101,516	1,748,276
KENTUCKY	26	324,457	17,036	1,262	495	4,398		347,558	3,152,685	290,564	6,219,557	543	57,476		9,720,825
LOUISIANA	14	185,548	10,985	599	187	2,721	3	200,343	1,620,412	201,183	430,553	894	41,764	268,004	2,562,810
MAINE	3	7,885	669	25	1	140		8,720	29,306	7,353	20,122	2	1,743		58,526
MARYLAND	2	61,142	4,499	440		262		66,343	554,430	95,734	158,179		66,573		904,916
MASSACHUSETTS															
MICHIGAN	13	144,378	3,631	258	24	1,144	1	149,436	884,766	54,845	83,971	134	15,011	16,154	1,054,885
MINNESOTA	49	309,416	12,984	1,161	260	3,371	23	327,220	3,076,670	243,007	306,961	7,498	54,283	103,265	3,791,684
MISSISSIPPI	24	308,687	23,216	1,833	825	3,443	2	338,006	3,044,894	350,584	1,099,979	22,902	56,273	22,397	4,597,129
MISSOURI	42	327,904	15,383	1,587	138	5,619	29	350,160	2,626,097	247,834	533,253	2,702	153,141	285,834	3,848,948
MONTANA	24	55,024	6,065	346	1,948	1,164	3	64,572	566,335	137,516	145,689	58,180	16,659	1,403	925,782
NEBRASKA	32	96,471	5,970	514	15,836	1,705	36	120,532	1,096,394	107,424	449,033	401,594	16,692	78,809	2,149,936
NEVADA	6	7,104	1,218	107	515	364	14	9,429	61,952	26,391	162,802	49,451	7,775	24,195	332,566
NEW HAMPSHIRE	1	30,854	3,088	98		1,721		35,761	180,191	35,041	39,191		1,231		255,654
NEW JERSEY	1	5,436	79	11		3		5,529	41,455	1,182	2,922		36		45,595
NEW MEXICO	16	66,862	14,223	933	3,305	1,587	2	86,912	302,056	232,440	446,458	121,623	27,207	5,105	1,134,889
NEW YORK	4	8,330	106	7		39		8,482	72,572	934	3,035		97		76,568
NORTH CAROLINA	28	329,606	15,729	783	1,056	5,343	6	351,523	2,873,782	246,865	328,958	2,684	55,725	99,657	3,607,671
NORTH DAKOTA	21	67,529	5,403	941	187	1,900	6	75,966	797,837	94,838	462,924	5,252	11,596	8,827	1,381,274
OHIO	27	177,651	7,886	738	2	1,374	2	187,653	2,011,654	114,675	102,063	92	53,722	54,943	2,427,149
OKLAHOMA	27	192,804	23,112	1,323	2,138	3,179	9	222,565	1,630,797	333,957	909,873	34,777	31,996	17,017	2,958,417
OREGON	14	54,247	5,182	253	3,992	718		64,392	849,910	145,079	372,059	328,043	27,462		1,722,593
PENNSYLVANIA	12	118,729	4,524	304	12	951	1	124,521	948,163	47,772	65,816	30	4,079	146	1,066,006
RHODE ISLAND															
SOUTH CAROLINA	20	226,803	9,547	679	86	3,632		240,747	2,039,711	151,625	228,798	1,767	32,342		2,454,273
SOUTH DAKOTA	32	80,628	4,614	412	708	2,116	3	88,481	905,815	78,032	111,320	19,930	21,323	4,626	1,141,046
TENNESSEE	24	413,704	43,240	2,877		524		460,445	5,961,314	701,977	2,036,493		65,788		5,765,565
TEXAS	77	520,328	53,106	2,674	35,509	7,487	12	619,116	3,992,743	941,595	1,179,143	788,830	83,075	57,237	7,023,223
UTAH	5	9,611	1,801	331	563	133	3	12,442	79,367	36,421	303,943	40,487	2,141	15,788	478,147
VERMONT	2	12,476	295	26		45	1	12,773	111,782	6,722	7,417		368	160	126,449
VIRGINIA	15	168,354	9,527	605	3	2,183		180,672	1,480,503	142,184	498,511	5	35,411		2,151,414
WASHINGTON	15	44,424	4,034	341	4,702	670	2	54,173	761,586	93,413	303,147	367,109	18,908	11,059	1,555,292
WEST VIRGINIA	1	3,200	121	7		52		3,380	18,476	1,018	925		116		20,535
WISCONSIN	29	126,427	3,690	392	251	1,587	13	132,360	1,233,210	64,065	63,236	8,308	10,863	117,153	1,496,865
WYOMING	14	31,187	2,710	943	1,666	1,029	1	40,536	270,840	107,853	465,036	66,736	11,239	1	1,301,705
VIRGIN ISLANDS															
PUERTO RICO															

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TABLE 50 (Cont'd): COMPOSITE REVENUES AND PATRONAGE CAPITAL, NUMBER OF CONSUMERS, AND MEGAWATT-HOUR SALES REPORTED BY REA BORROWERS OPERATING DISTRIBUTION SYSTEMS, BY STATES
CALENDAR YEAR 1974

State	No. of borr.	REVENUES AND PATRONAGE CAPITAL								
		Residential service farm and nonfarm	Commercial and industrial small	Commercial and industrial large	Irrigation	Other electric service	To others for resale	Total sales of electric energy	Other operating revenue	Total operating revenue
UNITED STATES	927	$1,440,910,104	$ 199,610,164	$ 336,723,279	$ 61,487,503	$ 39,582,264	$ 19,408,950	$ 2,203,722,273	$ 30,580,411	$ 2,234,311,684
ALABAMA	23	55,448,055	[illegible]	7,868,187	70,720	1,607,438		71,691,482	1,440,400	73,137,882
ALASKA	12	17,137,535	6,566,335	6,792,397	7,496	2,618,495	1,479,796	34,602,454	446,182	35,048,636
ARIZONA	9	7,960,655	3,010,808	7,541,084	4,064,173	384,327	238,031	23,719,080	322,958	24,042,038
ARKANSAS	19	43,660,094	4,560,329	5,102,545	1,421,965	948,387		56,143,319	744,219	56,887,538
CALIFORNIA	4	1,513,113	468,468	522,506	269,508	38,788		2,832,383	61,464	2,893,847
COLORADO	22	22,259,070	6,503,034	9,120,303	7,847,012	880,747	227,855	46,838,021	913,444	47,752,265
CONNECTICUT										
DELAWARE	1	7,506,693	240,645	613,376		45,319		8,406,033	107,905	8,513,938
FLORIDA	15	72,904,705	12,068,865	10,613,693	1,637,634	1,496,540	1,446,184	100,167,624	1,339,537	101,507,161
GEORGIA	42	108,955,943	10,597,950	11,845,551	147,224	2,205,390		133,752,064	3,019,664	136,771,728
HAWAII										
IDAHO	9	4,461,616	862,154	744,739	1,577,688	60,408	18,513	7,725,118	152,028	7,877,146
INOIS	27	44,037,461	3,577,274	8,850,887	107,395	282,422		56,855,439	499,913	57,355,352
IANA	41	62,969,723	2,999,982	4,702,798	11,571	926,162		75,510,236	773,072	76,283,308
IOWA	48	51,203,719	1,393,020	3,493,375	34,679	330,935	1,182,078	57,637,806	398,811	58,036,617
KANSAS	36	22,665,765	5,434,852	9,502,230	2,129,432	717,446	1,383,540	41,833,265	400,596	42,233,870
KENTUCKY	26	71,507,136	7,116,088	52,741,425	27,965	1,435,712		132,828,326	1,530,956	134,359,282
LOUISIANA	14	36,623,530	5,286,069	7,491,390	30,482	961,204	2,459,412	52,852,087	631,970	53,484,057
MAINE	3	1,291,927	299,115	467,393	102	76,195		2,123,732	20,128	2,143,860
MARYLAND	2	17,561,992	3,006,201	5,031,577		1,296,681		26,896,451	327,456	27,223,907
MASSACHUSETTS										
MICHIGAN	13	30,201,387	1,970,981	2,376,964	7,522	516,244	257,958	35,331,056	517,022	35,848,078
MINNESOTA	49	76,500,237	6,113,242	6,621,519	195,326	1,484,223	1,315,319	92,229,866	991,122	93,220,988
MISSISSIPPI	24	71,942,195	9,182,303	20,951,157	753,536	2,048,277	376,863	105,257,331	2,044,702	107,322,033
MISSOURI	42	66,117,525	6,024,507	8,638,335	77,558	2,409,804	2,957,413	86,225,142	1,606,779	87,831,921
MONTANA	24	11,434,952	2,687,950	1,881,736	842,612	332,480	16,757	17,196,337	242,009	17,438,346
NEBRASKA	32	25,992,270	2,403,360	5,825,250	10,429,954	388,507	1,050,953	46,170,294	352,108	46,522,402
NEVADA	6	1,475,452	817,729	1,958,480	877,758	214,561	142,199	5,526,179	243,184	5,769,363
NEW HAMPSHIRE	1	6,635,627	1,591,291	1,129,051		104,322		9,460,291	119,656	9,579,947
NEW JERSEY	1	920,239	30,197	60,061		888		1,011,385	15,868	1,027,253
NEW MEXICO	16	9,368,882	[illegible]	7,331,209	2,419,369	708,905	77,703	26,374,421	294,932	26,669,353
NEW YORK	4	1,497,979	26,771	74,793		3,707		2,003,250	54,550	2,057,800
NORTH CAROLINA	28	70,429,255	6,089,372	5,869,954	123,600	1,559,322	1,577,422	85,641,935	665,981	86,247,346
NORTH DAKOTA	21	18,956,734	2,230,296	6,199,335	127,149	305,120	106,408	27,915,042	166,635	28,081,677
OHIO	27	51,029,947	3,395,339	4,309,614	133	919,523	630,523	60,285,079	773,181	61,058,260
OKLAHOMA	27	40,017,066	[illegible]	12,019,119	791,111	772,966	180,737	62,468,123	573,832	63,039,955
OREGON	14	11,796,292	2,230,081	3,235,271	3,191,207	381,627		20,840,478	28,669	20,869,147
PENNSYLVANIA	12	25,563,037	1,349,207	1,805,363	1,349	143,296	3,977	28,866,229	365,100	29,231,329
RHODE ISLAND										
SOUTH CAROLINA	20	54,276,763	4,243,617	4,666,220	47,981	964,596		64,199,177	980,545	65,179,722
SOUTH DAKOTA	32	21,523,496	1,854,887	2,024,481	460,359	585,402	47,376	26,496,201	318,789	26,814,990
TENNESSEE	24	97,553,900	14,792,173	29,239,317		1,901,688		143,487,078	3,088,355	146,575,433
TEXAS	77	109,317,698	25,503,658	21,643,936	16,237,903	1,743,556	725,608	175,232,359	2,608,498	177,840,857
UTAH	5	1,736,603	748,194	4,012,321	577,147	68,764	171,927	7,534,956	88,580	7,623,536
VERMONT	2	3,939,985	217,947	222,312		17,185	3,579	4,401,008	116,544	4,517,552
VIRGINIA	15	42,317,881	4,811,489	10,760,424	492	961,719		58,752,005	346,693	59,098,698
WASHINGTON	15	10,164,136	1,380,758	1,961,699	2,886,986	270,511	46,083	16,690,413	303,580	16,993,993
WEST VIRGINIA	1	482,444	33,704	25,624		3,391		545,165	7,137	552,302
WISCONSIN	29	33,847,901	1,671,432	1,572,344	320,011	314,584	1,241,684	38,967,958	392,435	39,360,393
WYOMING	14	5,801,719	2,111,492	10,292,121	1,192,985	251,790	59	19,650,686	136,282	19,786,968
VIRGIN ISLANDS										
PUERTO RICO										

SOURCE: REA, Annual Statistical Report, 1974.

TABLE 51

COMPOSITE REVENUES AND PATRONAGE CAPITAL, NUMBER OF CONSUMERS, AND MEGAWATT-HOUR SALES REPORTED BY REA COOPERATIVE BORROWERS OPERATING DISTRIBUTION SYSTEMS
CALENDAR YEAR 1974

Item	Amount	Percent of total
Number of borrowers reporting	872	
Average number of consumers served		
Residential service (farm & nonfarm)	6,399,471	91.0
Commercial & industrial, small	426,211	6.1
Commercial & industrial, large	31,880	0.4
Irrigation	81,738	1.2
Other electric service	87,877	1.3
To others for resale	175	*
Total	7,027,352	100.0
Kilowatt-hour sales (thousands)		
Residential service (farm & nonfarm)	60,949,432	64.2
Commercial & industrial, small	7,202,481	7.6
Commercial & industrial, large	21,451,471	22.6
Irrigation	2,853,356	3.0
Other electric service	1,277,104	1.3
To others for resale	1,257,248	1.3
Total	94,991,092	100.0
Revenues and patronage capital		
Residential service (farm & nonfarm)	$ 1,500,631,193	70.0
Commercial & industrial, small	192,563,704	9.0
Commercial & industrial, large	320,458,327	15.0
Irrigation	50,574,483	2.3
Other electric service	34,251,109	1.6
To others for resale	15,793,424	0.7
Total from sales of electric energy	2,114,272,240	98.6
Other operating revenue	29,175,534	1.4
Total operating revenue	$ 2,143,447,774	100.0

*Less than 0.05 percent.

SOURCE: REA, Annual Statistical Report, 1974.

FINANCIAL DATA FOR THE INDUSTRY

TABLE 52

THE REVENUE DOLLAR
PRIVATELY OWNED CLASS A & B ELECTRIC UTILITIES

		1973	1974
Source:	Electric utility service	83.4¢	83.8¢
	Other utility service	12.1	11.1
	Other receipts	4.5	5.1
	Total	$1.00	$1.00
Disposition:	Electric operation and maintenance: 1/		
	Fuel (including purchased power)	29.9¢	33.1¢
	Other production	5.4	4.8
	Transmission	1.2	1.0
	Distribution	4.5	3.7
	Customer accounts	2.0	1.9
	Sales, administration and general	5.4	4.7
	Subtotal	43.4¢	49.2¢
	Non-electric operation and maintenance	8.8¢	8.4¢
	Depreciation	9.3	8.2
	Taxes other than income	9.4	8.3
	Income taxes - net	4.7	3.7
	Interest charges	10.1	10.1
	Other deductions and extraordinary charges	--	0.1
	Preferred dividends	2.3	2.2
	Common dividends	8.2	6.9
	Retained income	3.8	2.9
	Total	$1.00	$1.00

1/ Includes salaries and wages of 9.9¢ in 1973 and 8.5¢ in 1974 for the electric operations.

Source: FPC, Statistics of Privately Owned, 1973, and conversations with the FPC.

TABLE 53---*—Privately owned class A and class B electric utilities in the United States—composite balance sheet December 31*

[Thousands of dollars]

Item	1973 Amount	1973 Percent of total	1972 Amount	1972 Percent of total
ASSETS AND OTHER DEBITS				
Electric utility plant	130,839,712	--	116,643,757	--
Accumulated provisions for depreciation and amortization	26,226,867	--	23,863,601	--
Net electric utility plant	104,612,845	83.8	92,780,156	83.9
Other utility plant	10,798,978	--	10,234,457	--
Accumulated provisions for depreciation and amortization	2,619,731	--	2,445,237	--
Net other utility plant	8,179,247	6.5	7,789,220	7.0
Total utility plant	141,638,690	--	126,878,214	--
Accumulated provisions for depreciation and amortization	28,846,598	--	26,308,838	--
Net total utility plant	112,792,092	90.3	100,569,376	90.9
Utility plant adjustments	--	--	--	--
Nonutility property less accumulated provisions for depreciation and amortization	179,910	.1	171,172	.2
Investment in associated companies	179,730	.1	2,010,386	1.8
Investments in subsidiary companies 1/	2,605,637	2.1		
Other investments	333,347	.3	296,021	.3
Special funds	113,999	.1	29,323	0
Total other property and investments	3,412,623	2.7	2,506,902	2.3
Cash	659,809	.5	624,578	.6
Special deposits	286,177	.2	250,361	.2
Working funds	34,144	0	33,929	0
Temporary cash investments	255,696	.2	432,022	.4
Notes and accounts receivable less accumulated provision for uncollectible accounts	3,106,425	2.5	2,808,796	2.5
Receivables from associated companies	254,173	.2	226,017	.2
Materials and supplies	2,436,445	2.0	1,965,113	1.8
Prepayments	288,948	.3	287,305	.3
Other current and accrued assets	383,010	.3	307,641	.3
Total current and accrued assets	7,704,827	6.2	6,935,762	6.3
Unamortized debt discount and expense	177,433	.2	176,037	.2
Extraordinary property losses	36,953	0	16,516	0
Preliminary survey and investigation charges	45,451	0	38,256	0
Clearing accounts	16,366	0	18,344	0
Unamortized loss on reacquired debt 2/	260	0		
Other deferred debits	663,393	.6	339,813	.3
Total deferred debits	939,856	.8	588,966	.5
Total assets and other debits	124,849,398	100.0	110,601,006	100.0

TABLE 53 (Continued)

Liabilities and Other Credits				
Common stock issued	17,746,908	14.2	16,034,726	14.5
Preferred stock issued	13,089,136	10.5	11,428,512	10.3
Capital stock subscribed	2,442	0		
Premium on capital stock	5,823,903	4.7	4,938,916	4.5
Other captial stock items	--	--	4,297	0
Other paid-in capital	2,409,440	1.9	1,992,376	1.8
Installments received on capital stock	-- 2,797	0		
Capital stock discount and expense	(189,265)	(.1)	(164,619)	(.1)
Retained earnings	12,396,489	9.9	11,294,506	10.2
Unappropriated undistributed subsidiary earnings 1/	393,611	.3		
Reacquired capital stock	(1,779)	0	(1,441)	0
Total proprietary capital	51,673,682	41.4	45,527,271	41.2
Bonds (less bonds reacquired)	54,453,471	43.5	50,177,669	45.4
Advances from associated companies	83,103	.1	74,367	.1
Unamortized premium on long-term debt 2/	99,773	.1		
Unamortized discount on long-term debt - dr. 2/	50,859	0		
Other long-term debt	2,087,993	1.7	1,301,091	1.1
Total long-term debt	56,673,481	45.4	51,553,127	46.6
Notes payable	4,057,765	3.3	2,970,018	2.7
Accounts payable	2,246,462	1.8	1,809,983	1.6
Payables to associated companies	362,654	.3	249,092	.2
Customer deposits	322,256	.3	300,267	.3
Taxes accrued	1,901,341	1.5	1,687,339	1.5
Interest accrued	896,677	.7	781,813	.7
Dividends declared	433,618	.3	389,712	.4
Tax collections payable	116,078	.1	104,114	.1
Other current and accrued liabilities	625,652	.5	469,385	.4
Total current and accrued liabilities	10,962,503	8.8	8,751,724	7.9
Unamortized premium on debt	--	--	69,794	.1
Customer advances for construction	158,723	.1	136,896	.1
Accumulated deferred investment tax credits	1,004,948	.8	796,272	.7
Unamortized gain on reacquired debt 2/	6,852	0		
Other deferred credits	193,453	.2	151,491	.1
Total deferred credits	1,363,976	1.1	1,153,453	1.0
Total operating reserves	176,204	.1	196,713	.2
Contributions in aid of construction	652,471	.5	626,213	.6
Accelerated amortization	641,921	.5	682,918	.6
Liberalized depreciation	2,506,385	2.0	2,024,519	1.8
Other	198,775	.2	86,070	.1
Total accumulated deferred income taxes	3,347,081	2.7	2,793,506	2.5
Total liabilities and other credits	124,849,398	100.0	110,601,006	100.0

1/ New accounts in 1973. Commission Order No. 469 issued 2/1/73.

2/ New accounts in 1973. Commission Order No. 505 issued 2/11/74.

SOURCE: FPC, Statistics of Privately Owned, 1973.

TABLE 54

Privately owned class A and class B utilities in the United States, composite balance sheet— 1963-1973

[Thousands of dollars]

	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963
ASSETS AND OTHER DEBITS											
Electric utility plant	130,839,712	118,643,757	104,299,921	93,302,566	83,670,833	76,025,710	69,616,732	64,066,470	59,702,798	56,326,588	53,474,464
Accumulated provisions for depreciation and amortization	26,226,867	23,863,601	22,006,384	20,253,223	18,674,943	17,245,697	16,011,342	14,791,937	13,630,620	12,574,819	11,810,655
Net electric utility plant	104,612,845	92,780,156	82,293,537	73,049,343	64,995,890	58,780,013	53,605,390	49,274,533	46,072,178	43,752,069	41,663,809
Other utility plant	10,798,978	10,234,457	9,535,885	8,974,460	8,377,790	7,914,505	7,489,742	7,050,336	6,612,619	6,189,423	5,813,385
Accumulated provisions for depreciation and amortization	2,619,731	2,445,237	2,267,926	2,095,480	1,924,427	1,794,013	1,674,123	1,533,938	1,417,706	1,297,627	1,210,883
Net other utility plant	8,179,247	7,789,220	7,267,959	6,878,970	6,453,363	6,120,492	5,815,619	5,516,398	5,194,913	4,891,796	4,602,502
Total utility plant	141,638,690	128,678,213	113,836,806	102,277,036	92,046,623	83,940,215	77,106,474	71,116,806	66,315,417	62,516,011	59,287,849
Accumulated provisions for depreciation and amortization	28,846,598	26,308,837	24,274,310	22,348,703	20,599,370	19,039,710	17,685,465	16,325,875	15,048,326	13,872,146	12,721,538
Net total utility plant	112,792,092	100,369,376	89,561,496	79,928,333	71,449,253	64,900,505	59,421,009	54,790,931	51,267,091	48,643,865	46,566,311
Utility plant adjustments	...	—	547	581	12,163	650	23	24	25	10	...
Nonutility property less accumulated provisions for depreciation and amortization	179,910	171,172	148,521	180,991	152,742	155,114	142,627	130,817	127,016	117,741	110,661
Investment in associated companies	179,730	2,010,388	1,772,140	1,275,976	1,231,182	1,092,563	983,604	960,281	922,173	917,563	899,324
Investments in subsidiary companies [2]	2,605,637										
Other investments	333,347	296,021	306,803	268,157	273,554	197,884	208,976	185,412	171,348	154,851	119,362
Special funds	113,999	28,323	17,180	19,077	22,724	16,811	18,024	18,659	26,685	20,747	19,102
Total other property and investments	3,412,623	2,506,602	2,244,944	1,742,201	1,680,202	1,464,372	1,353,238	1,294,869	1,247,222	1,210,932	1,148,449
Cash	659,809	824,578	617,664	611,962	613,527	602,947	563,098	574,943	540,657	554,857	575,365
Special deposits	286,177	250,381	147,706	180,538	142,017	142,833	117,556	96,550	102,019	96,413	99,767
Working funds	34,144	33,626	33,228	33,800	22,721	30,204	23,743	21,645	17,770	16,752	16,735
Temporary cash investments	255,686	432,022	360,946	170,389	182,429	223,208	213,122	434,312	393,723	564,384	463,044
Notes and accounts receivable less accumulated provisions for uncollectible accounts	3,108,425	2,866,766	2,325,067	2,106,161	1,856,168	1,673,258	1,571,201	1,429,480	1,282,796	1,221,046	1,116,966
Receivables from associated companies	254,173	226,017	203,173	202,698	135,220	95,217	89,976	81,186	74,749	62,246	58,642
Materials and supplies	2,436,445	1,868,113	1,587,991	1,529,037	1,428,766	1,267,041	1,284,530	1,089,473	963,628	904,795	855,767
Prepayments	288,948	287,305	248,763	270,973	248,014	206,710	197,033	179,531	153,404	151,942	155,968
Other current and accrued assets	383,010	307,841	262,067	215,809	183,146	167,612	96,234	112,429	80,403	61,650	68,687
Total current and accrued assets	7,704,827	6,635,762	5,886,605	5,321,187	4,610,111	4,439,030	4,156,493	4,019,549	3,639,149	3,634,076	3,410,941
Unamortized debt discount and expense	177,433	178,037	154,153	131,710	104,010	86,679	78,840	74,196	69,343	71,665	72,616
Extraordinary property losses	36,953	16,516	16,320	15,923	14,715	14,897	8,303	10,677	12,878	13,215	18,339
Preliminary survey and investigation charges	45,451	38,258	27,971	21,731	22,322	23,854	17,993	14,046	13,443	11,775	11,735
Clearing accounts	16,366	18,344	15,742	15,239	16,437	12,972	14,288	9,347	8,386	9,791	8,568
Unamortized loss on reacquired debt [3]	260										
Other deferred debits	663,393	326,813	265,996	240,395	207,297	156,827	146,473	145,741	140,579	156,058	151,707
Total deferred debits	939,856	586,968	480,182	424,998	364,781	294,929	265,897	254,009	244,829	264,504	263,185
Total assets and other debits	124,849,398	110,601,006	98,173,774	87,417,300	78,316,810	71,099,486	65,196,655	60,359,382	56,395,116	53,753,387	51,388,886

See footnotes at end of table.

TABLE 54 (Continued)

Privately owned class A and B electric utilities in the United States, composite balance sheet— 1963-1973 —Continued

[Thousands of dollars]

	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963
LIABILITIES AND OTHER CREDITS											
Common stock issued	17,746,908	16,034,725	14,652,716	13,282,511	12,201,328	11,763,785	11,574,204	11,171,350	10,968,283¹	11,063,584	10,560,311
Preferred stock issued	13,089,136	11,428,512	9,266,485	7,499,278	6,382,470	5,981,795	5,505,326	5,040,550	4,700,185	4,557,330	4,513,901
Capital stock subscribed	2,442										
Premium on capital stock	5,823,903	4,938,916	3,999,010	3,380,914	2,944,764	2,733,866	2,398,464	2,366,587	2,408,702¹	1,920,984	1,802,606
Other capital stock items	--	4,297	5,286	30,061	7,288	2,268	22,196	27,447	4,772	4,173	5,180
Other paid-in capital	2,409,440	1,992,375	1,857,719	1,102,612	829,663	614,470	490,814	400,793	293,984	306,213	270,235
Installments received on capital stock	2,797										
Capital stock discount and expense	(189,265)	(164,819)	(137,470)	(111,038)	(91,851)	(88,002)	(81,361)	(77,404)	(75,437)	(76,003)	(83,271)
Retained earnings	12,396,489	11,294,506	10,129,340	9,362,756	8,608,166	7,742,233	6,997,249	6,406,684	5,712,390	5,142,118	4,640,145
Unappropriated undistributed subsidiary earnings 2/	393,611										
Reacquired capital stock	(1,779)	(1,441)	(2,730)	(2,619)	(3,771)	(2,746)	(3,649)	(10,836)	(9,751)	(7,701)	(5,097)
Total proprietary capital	51,673,682	45,527,271	39,470,356	34,544,575	30,878,037	28,747,669	26,903,273	25,325,171	24,003,128	22,910,698	21,704,010
Bonds (less bonds reacquired)	56,453,471	50,177,669	46,112,499	41,407,569	36,399,076	32,844,634	29,972,137	27,404,320	25,127,638	24,211,235	23,219,593
Advances from associated companies	83,103	74,367	71,587	63,394	87,283	82,603	78,373	77,719	87,098	108,665	122,477
Unamortized premium on long-term debt 2/	99,773										
Unamortized discount on long-term debt - dr 2/	50,859										
Other long-term debt	2,087,993	1,301,091	523,659	466,567	585,404	592,206	307,958	246,254	287,715	269,065	289,762
Total long-term debt	56,673,481	51,553,127	46,707,745	41,937,530	37,071,763	33,519,443	30,358,468	27,728,293	25,502,451	24,588,965	23,631,832
Notes payable	4,057,765	2,970,016	2,837,867	2,701,815	2,805,604	1,961,055	1,480,233	1,052,852	867,338	518,982	467,383
Accounts payable	2,246,462	1,809,983	1,570,390	1,407,169	1,182,259	988,160	928,497	789,319	672,529	583,553	582,794
Payables to associated companies	362,654	249,093	231,276	183,862	156,326	144,373	126,454	137,069	128,460	87,206	71,284
Customer deposits	322,256	300,267	285,687	268,317	259,281	252,370	240,338	232,929	220,012	207,000	193,739
Taxes accrued	1,901,341	1,687,339	1,609,683	1,477,854	1,453,041	1,329,809	1,302,752	1,529,292	1,626,961	1,638,176	1,611,150
Interest accrued	896,677	781,813	692,273	583,276	471,316	383,728	325,858	280,440	248,679	233,924	222,473
Dividends declared	433,618	389,712	332,772	270,241	244,617	249,256	235,217	214,040	206,757	190,498	173,445
Tax collections payable	116,078	104,114	90,345	90,949	80,637	67,551	56,004	54,539	64,192	57,493	57,699
Other current and accrued liabilities	625,652	459,385	367,356	325,115	295,300	269,848	247,848	204,637	186,769	199,402	238,646
Total current and accrued liabilities	10,962,503	8,751,724	7,917,649	7,308,598	6,948,381	5,646,150	4,943,201	4,495,117	4,221,697	3,736,234	3,618,613
Unamortized premium on debt	--	69,794	71,481	70,777	70,792	70,150	68,354	66,152	64,298	64,328	66,553
Customer advances for construction	158,723	135,898	110,123	88,132	73,762	68,928	64,017	58,643	53,694	51,671	50,520
Accumulated deferred investment tax credits	1,004,948	798,272	613,250	522,920	496,276	429,631	348,743	267,670	208,943	147,111	----------
Unamortized gain on reacquired debt 2/	6,852										
Other deferred credits	193,453	151,491	133,381	116,924	113,180	95,350	84,489	74,564	75,435	71,078	205,388
Total deferred credits	1,363,976	1,153,453	928,235	798,753	754,010	664,059	565,603	467,031	402,370	334,188	322,461
Property insurance reserve	--	51,419	41,263	36,901	32,694	31,434	36,125	32,883	28,538	26,052	26,228
Injuries and damages reserve	--	41,204	37,295	37,595	37,739	39,261	34,993	36,795	37,614	36,328	34,163
Pensions and benefits reserve	--	34,392	33,932	32,800	33,176	32,617	30,824	31,598	31,296	29,301	28,912
Other operating reserves	--	48,698	55,891	38,970	42,641	41,809	40,187	44,197	45,887	49,787	48,943
Total operating reserves	176,204	175,713	168,081	146,266	146,250	145,121	142,129	145,473	143,335	141,468	138,246
Contributions in aid of construction	652,471	628,213	557,370	483,468	430,522	386,154	354,922	325,855	293,521	262,163	236,441
Accelerated amortization	661,921	682,918	725,218	777,216	822,750	875,302	925,351	974,351	1,024,317	1,067,586	1,098,642
Liberalized depreciation	2,506,385	2,024,519	1,657,527	1,414,779	1,264,583	1,114,954	1,003,318	897,420	803,748	711,424	637,533
Other	198,775	86,070	41,593	6,115	214	634	390	471	549	661	1,108
Total accumulated deferred income taxes	3,367,081	2,793,505	2,424,338	2,198,110	2,087,547	1,990,890	1,929,059	1,872,242	1,828,614	1,779,671	1,737,283
Total liabilities and other credits	124,849,398	110,801,006	98,173,774	87,417,300	78,316,510	71,099,486	65,196,655	60,359,382	56,395,116	53,753,387	51,388,886

1/ Accounts combined in 1973.

2/ New accounts in 1973. Commission Order No. 469 issued 2/1/73.

3/ New accounts in 1973. Commission Order No. 505 issued 2/11/74.

SOURCE: FPC, Privately Owned, 1973.

TABLE 55 --- *Privately owned class A and class B electric utilities in the United States*

STATEMENT OF CHANGES IN FINANCIAL POSITION, YEAR ENDED DECEMBER 31

[Thousands of dollars]

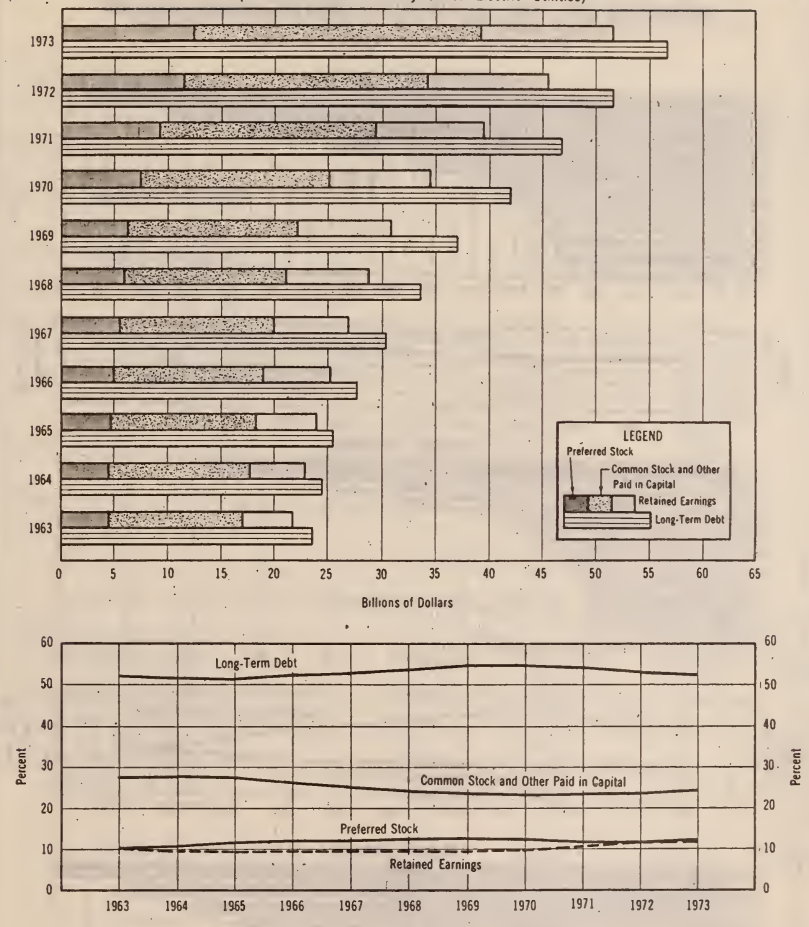
Item	1973	1972
Sources of funds:		
Funds from operations:		
Net income	4,985,767	4,419,491
Principal noncash charges (credits) to income:		
Depreciation and depletion	3,302,500	2,947,659
Amortization	75,668	55,280
Provision for deferred or future income taxes—(net)	526,357	359,330
Investment tax credit adjustments	205,207	163,062
Other—(net)	(1,074,910)	(676,083)
Total funds from operations	8,020,589	7,268,739
Funds from outside sources (new money):		
Long-term debt	5,411,119	5,112,742
Preferred stock	1,718,324	2,292,181
Common stock	2,376,166	2,180,900
Net increase in short-term debt	1,686,514	—
Other—(net)	490,025	532,651
Total funds from outside sources	11,682,148	10,118,474
Sale of noncurrent assets	253,635	243,140
Contributions from associated and subsidiary companies	228,337	220,730
Other—(net)	868,685	354,894
Total sources of funds	21,053,394	18,205,977

Item	1973	1972
Application of funds:		
Construction and plant expenditures (including land):		
Gross additions to utility plant (less nuclear fuel)	14,526,426	13,071,908
Gross additions to nuclear fuel	367,273	272,377
Gross additions to common utility plant	119,041	126,319
Gross additions to nonutility plant	23,132	7,853
Other	(163,768)	(8,802)
Total applications to construction and plant expenditures (including land)	14,872,104	13,469,155
Dividends on preferred stock	794,553	633,262
Dividends on common stock	2,844,609	2,555,251
Funds for retirement of securities and short-term debt:		
Long-term debt	677,205	629,343
Preferred stock	13,342	113,939
Redemption of capital stock	(46,730)	1,691
Net decrease in short-term debt	757,863	185
Other—(net)	140,229	38,799
Purchase of other non-current assets	136,967	36,897
Investments in and advances to associated and subsidiary companies	430,105	252,844
Other—(net)	433,147	474,611
Total applications of funds	21,053,394	18,205,977

SOURCE: FPC, Privately Owned, 1973.

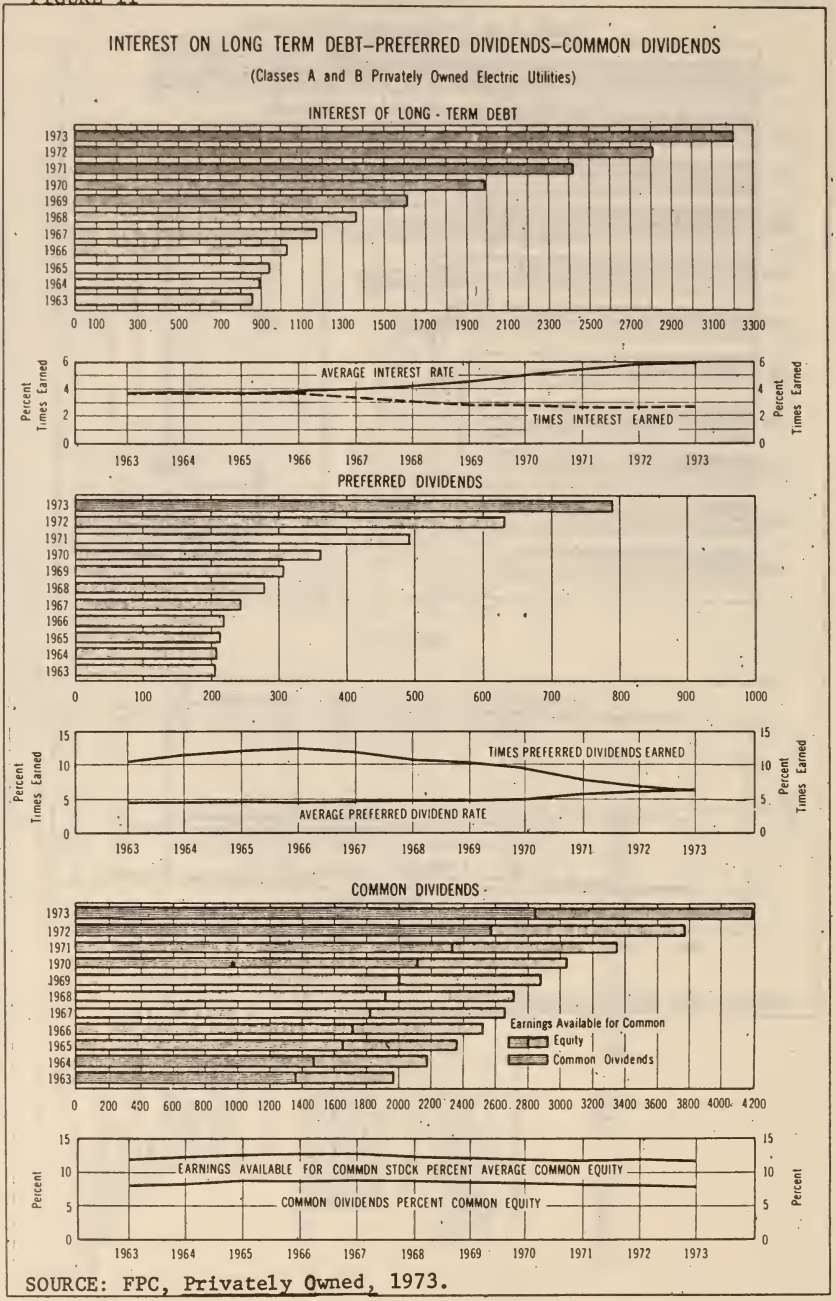
FIGURE 10 CAPITALIZATION

(Classes A and B Privately Owned Electric Utilities)



SOURCES: FPC, Privately Owned, 1973.

FIGURE 11


INTEREST ON LONG TERM DEBT–PREFERRED DIVIDENDS–COMMON DIVIDENDS
(Classes A and B Privately Owned Electric Utilities)
INTEREST OF LONG - TERM DEBT
1973
1972
1971
1970
1969
1968
1967
1966
1965
1964
1963
0 100 300 500 700 900 1100 1300 1500 1700 1900 2100 2300 2500 2700 2900 3100 3300
Percent Times Earned
AVERAGE INTEREST RATE
TIMES INTEREST EARNED
0 2 4 6
1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973
PREFERRED DIVIDENDS
0 100 200 300 400 500 600 700 800 900 1000
TIMES PREFERRED DIVIDENDS EARNED
AVERAGE PREFERRED DIVIDEND RATE
0 5 10 15
COMMON DIVIDENDS
Earnings Available for Common
Equity
Common Dividends
0 200 400 600 800 1000 1200 1400 1600 1800 2000 2200 2400 2600 2800 3000 3200 3400 3600 3800 4000 4200
EARNINGS AVAILABLE FOR COMMON STOCK PERCENT AVERAGE COMMON EQUITY
COMMON DIVIDENDS PERCENT COMMON EQUITY
Percent
0 5 10 15

SOURCE: FPC, Privately Owned, 1973.

TABLE 56

PRIVATELY OWNED CLASS A AND B ELECTRIC UTILITIES IN THE U.S.

Capitalization Ratios

Capital Account	Percent of Capitalization 1973	1972
Long-term debt	52.3	53.1
Preferred stock	12.1	11.8
Common equity	35.6	35.1
Common stock and other paid-in capital	(24.2)	(23.5)
Unappropriated undistributed subsidiary earnings	(.5)	-
Retained earnings	(10.9)	(11.6)
Total	100.0	100.0

Returns on Common Equity

Rate of Return	1973 Number	1973 Percent	1972 Number	1972 Percent
Less than 5.00	12	5.6	11	5.3
5.00 - 7.99	38	17.8	33	15.8
8.00 - 10.99	65	30.5	64	30.6
11.00 - 13.99	63	29.6	66	31.6
14.00 - 16.99	31	14.6	31	14.8
17.00 and above	4	1.9	4	1.9
Total	213	100.0	209	100.0

SOURCE: FPC, Privately Owned, 1973.

TABLE 57
PRIVATELY OWNED CLASS A AND B ELECTRIC UTILITIES IN THE U.S.
Selected Financial Data

	1973	1972	1971	1970	1969	1968
Long-Term Debt:						
Percent of total capitalization	52.3	53.1	54.2	54.8	54.6	53.8
Percent of net utility plant	50.2	51.3	52.2	52.5	51.9	51.6
Times interest charges earned (after taxes)	2.7	2.6	2.6	2.8	2.9	3.1
Net income % of revenues	15.0	15.0	14.8	14.7	15.2	15.4
Return on common equity - %	11.5 1/	11.8	11.7	11.8	12.2	12.3
Common dividend payout rate - %	67.9	67.9	69.4	70.9	69.4	70.7
Electric operations % of total operations (revenues)	87.4	86.0	85.8	85.6	85.5	85.2
Gross electric plant per dollar electric revenues	$4.50	$4.60	$4.67	$4.71	$4.64	$4.60
Electric operating expenses % of electric operating revenues - (operating ratio)	77.9	77.8	77.7	77.4	77.1	77.3
Electric operating income % of net electric plant plus working capital	7.6	7.6	7.4	7.3	7.4*	7.3*

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* Computed on previous year's formulae.

1/ Excluding earnings on equity investments in subsidiary companies - 11.2%.

SOURCE: FPC, Statistics of Privately Owned, 1973.

TABLE 58

MOODY'S AVERAGE YIELDS ON UTILITY BONDS AND STOCKS
BY MOODY'S BOND RATINGS AND STOCK QUALITY GROUPS
1967-1974

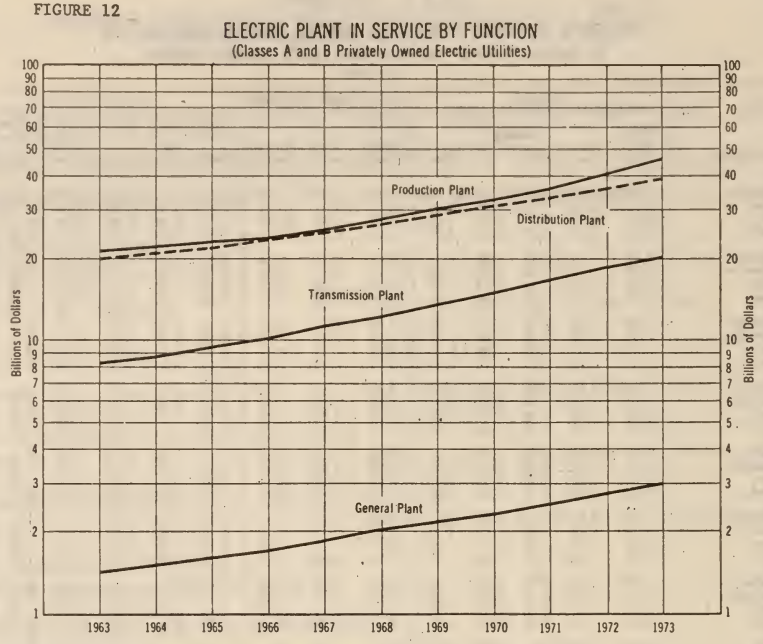
End of Month	BONDS					PREFERRED STOCKS			COMMON STOCKS					
									High Quality		Good Quality		Medium Quality	
	Over-all* Average	Rating Aaa	Aa	A	Baa	High Quality	Good Quality	Medium Quality	Yield	E/P Ratio†	Yield	E/P Ratio†	Yield	E/P Ratio†
1974														
December	10.13%	9.08%	9.47%	10.44%	11.52%	10.17%	11.20%	11.72%	8.88%	13.61%	10.81%	17.95%	15.51%	18.49%
September	10.28	9.54	10.12	10.64	10.80	10.41	10.94	11.70	9.05	14.22	10.62	17.60	14.00	16.91
June	9.22	8.71	9.06	9.50	9.60	9.32	9.64	10.00	8.79	13.47	10.16	15.86	12.16	15.48
March	8.56	8.25	8.48	8.60	8.92	8.06	8.61	8.74	7.51	11.51	7.99	11.70	8.66	11.19
1973														
December	8.21	7.90	8.10	8.24	8.59	8.04	8.35	8.24	8.06	11.27	8.24	11.19	7.75	10.91
September	8.07	7.76	7.92	8.08	8.52	7.72	8.04	8.08	6.84	9.52	6.92	10.32	7.08	9.97
June	7.73	7.53	7.63	7.78	7.97	7.53	7.62	7.75	6.88	9.65	6.93	10.19	7.26	10.38
March	7.67	7.44	7.52	7.69	8.01	7.39	7.53	7.60	6.42	9.34	6.69	9.83	6.72	9.80
1972														
December	7.48	7.29	7.39	7.51	7.74	7.32	7.56	7.77	5.52	8.07	6.07	8.91	6.27	9.05
September	7.63	7.42	7.50	7.64	7.96	7.37	7.61	7.82	6.12	9.18	6.47	9.72	6.94	9.58
June	7.77	7.41	7.57	7.80	8.30	7.28	7.43	7.71	6.37	9.31	6.73	9.93	6.72	9.40
March	7.81	7.53	7.69	7.76	8.25	6.99	7.26	7.58	5.96	8.55	6.23	8.88	6.42	8.87
1971														
December	7.87	7.50	7.76	7.80	8.40	7.15	7.39	7.87	5.65	7.84	5.81	8.25	6.06	8.31
September	8.10	7.76	7.95	8.23	8.45	7.28	7.55	8.06	6.23	8.56	6.18	8.99	6.46	8.98
June	8.35	7.98	8.20	8.45	8.77	7.31	7.58	8.13	5.95	8.00	5.65	7.91	6.17	8.32
March	8.03	7.56	7.98	7.99	8.59	6.91	7.11	7.74	5.55	7.51	5.36	7.71	5.80	7.83
1970														
December	8.29	7.80	8.20	8.23	8.91	7.30	7.55	8.43	5.77	7.69	5.23	7.52	5.89	7.95
September	8.75	8.33	8.63	8.79	9.24	7.76	8.00	8.56	6.38	8.76	6.15	8.99	6.75	8.92
June	9.20	8.89	9.00	9.22	9.67	7.84	8.13	8.56	6.88	9.51	6.85	10.24	7.36	9.96
March	8.37	8.10	8.18	8.26	8.94	7.26	7.47	8.43	5.62	7.71	5.29	7.99	6.14	8.08
1969														
December	8.57	8.05	8.40	8.76	9.05	7.54	7.80	8.53	5.63	7.98	5.42	8.27	6.04	8.34
September	7.79	7.40	7.67	7.82	8.27	7.09	7.08	7.71	5.48	7.79	5.31	8.01	6.36	8.69
June	7.47	7.13	7.38	7.45	7.90	6.71	6.87	7.32	5.15	7.16	4.75	7.16	4.88	6.57
March	7.37	7.09	7.23	7.40	7.74	6.39	6.58	7.13	4.75	6.54	4.47	6.75	5.18	7.20
1968														
December	6.85	6.52	6.75	6.87	7.23	6.32	6.52	6.97	4.45	6.20	4.35	6.54	4.91	8.46
September	6.27	6.03	6.12	6.27	6.67	5.97	6.17	6.64	4.77	6.73	4.57	6.88	4.96	6.72
June	6.60	6.32	6.46	6.62	7.01	6.17	6.33	6.84	4.55	6.36	4.49	6.89	4.85	6.78
March	6.39	6.13	6.26	6.41	6.75	6.04	6.28	6.63	4.85	7.01	4.69	7.41	5.28	7.52
1967														
December	6.56	6.33	6.41	6.63	6.88	6.25	6.46	6.98	4.59	6.58	4.67	7.05	5.13	7.30
September	6.04	5.84	5.91	6.06	6.33	5.70	5.86	6.23	4.43	6.29	4.41	6.85	4.85	6.93
June	5.90	5.69	5.75	5.91	6.23	5.49	5.76	5.96	4.47	6.21	4.29	6.62	4.80	6.83
March	5.37	5.16	5.20	5.38	5.74	5.15	5.47	5.71	3.89	5.83	3.90	6.23	4.60	6.59

NOTE: Yields shown under preferred stocks and common stocks represent averages of ten companies in each quality group.
* Average yield for 40 utility bonds, ten in each of the four top quality ratings shown.
† Ratio in percent is obtained by dividing earnings per share by market price per share.

Source: Moody's Investors Service

SOURCE: EEI, Statistical Year Book, 1974.

FIGURE 12



SOURCE: FPC, Privately Owned, 1973.

TABLE 59

Privately owned class A and class B electric utilities in the United States, electric utility plant—1963-1973

[Thousands of dollars]

	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963
Intangible plant:											
Organization	6,290	7,217	7,319	7,765	8,202	9,040	10,188	10,618	11,046	11,752	11,771
Franchises and consents	8,459	8,207	7,886	7,866	7,639	7,357	7,013	6,890	6,794	6,697	6,474
Miscellaneous intangible plant	5,141	4,743	3,664	4,229	3,912	4,367	4,344	4,557	5,059	5,061	5,469
Total intangible plant	19,890	20,167	18,869	19,860	19,753	20,764	21,545	22,065	22,899	23,510	23,714
Steam production plant:											
Land and land rights	298,704	277,395	255,971	232,291	210,611	204,803	213,617	196,670	182,212	174,912	172,323
Structures and improvements	5,710,422	5,257,265	4,887,833	4,621,744	4,331,269	4,123,985	3,981,904	3,810,432	3,716,506	3,606,455	3,512,699
Boiler plant equipment	17,056,997	15,090,528	13,478,633	12,200,361	11,227,636	10,260,913	9,446,887	8,777,735	8,417,390	8,000,522	7,549,119
Engines and engine driven generators	412,517	1,630	1,630	2,896	1,259	[1] 2	[1] 2	3	2	38	284
Turbogenerator units	9,126,512	8,713,941	8,089,967	7,479,183	7,032,921	6,601,457	6,211,657	5,834,423	5,634,670	5,414,469	5,251,829
Accessory electric equipment	2,566,121	2,434,559	2,251,856	2,100,672	1,968,727	1,849,120	1,725,694	1,640,518	1,593,765	1,552,347	1,488,841
Miscellaneous power plant equipment	431,954	380,678	352,801	317,896	297,857	270,202	256,194	238,400	232,537	217,650	205,556
Total steam production plant	35,603,227	32,155,996	29,318,691	26,955,043	25,090,280	23,310,511	21,835,955	20,498,181	19,777,082	18,966,393	18,178,651
Nuclear production plant:											
Land and land rights	35,736	22,085	14,628	9,528	3,832	3,431	2,496	3,719	1,861	1,861	1,856
Structures and improvements	933,510	636,467	280,626	207,226	119,170	120,231	107,740	91,167	90,288	89,892	89,072
Reactor plant equipment	1,678,123	1,056,920	504,387	397,786	220,025	209,451	182,994	144,597	124,039	123,626	122,684
Turbogenerator units	895,548	620,203	310,820	236,089	109,926	114,658	92,270	64,311	59,246	59,705	60,757
Accessory electric equipment	284,203	172,690	71,700	49,729	24,183	25,544	21,596	15,493	14,318	14,276	15,619
Miscellaneous power plant equipment	57,260	34,350	179,204	169,058	245,739	[1] (847)	[1] (2,149)	[1] (4,118)	[1] (4,994)	[1] (4,848)	[1] (4,846)
Total nuclear production plant	3,884,380	2,541,715	1,361,365	1,069,416	722,875	472,468	404,857	315,169	284,758	284,512	285,142
Hydraulic production plant:											
Land and land rights	416,986	407,918	412,471	390,509	390,584	391,294	389,284	379,201	370,915	364,984	351,949
Structures and improvements	433,131	403,936	377,154	358,092	343,878	341,335	335,590	304,126	305,598	292,846	284,050
Reservoirs, dams, and waterways	2,478,184	2,194,380	2,154,477	2,128,378	2,083,856	2,055,157	2,024,037	1,839,488	1,868,314	1,745,484	1,674,974
Water wheels, turbines, and generators	723,572	634,121	614,347	606,417	593,688	586,579	580,169	525,805	514,193	496,166	483,387
Accessory electric equipment	154,832	136,247	129,311	126,375	121,410	119,268	114,251	104,155	101,757	99,890	94,078
Miscellaneous power plant equipment	49,004	41,891	39,100	37,991	36,421	35,576	33,860	30,476	30,288	28,814	27,054
Roads, railroads, and bridges	39,863	35,522	30,789	30,283	30,776	30,877	30,941	30,703	30,679	25,318	24,007
Total hydraulic production plant	4,295,572	3,853,015	3,757,649	3,678,045	3,600,613	3,560,086	3,508,132	3,263,954	3,221,744	3,053,502	2,939,497
Other production plant:											
Land and land rights	12,544	10,677	6,554	4,390	4,277	1,599	1,392	1,730	1,102	922	836
Structures and improvements	90,536	73,965	55,584	43,204	36,585	24,421	20,232	15,481	15,517	14,218	14,142
Fuel holders, producers, and accessories	97,744	93,803	53,260	35,550	21,956	14,791	8,246	11,962	5,065	4,355	4,104
Prime movers	2,029,331	1,773,003	1,416,542	1,156,672	777,709	507,583	306,771	187,253	154,316	119,422	110,581
Generators											
Accessory electric equipment	177,627	152,191	111,611	89,775	60,815	44,609	30,817	15,191	14,476	12,492	11,160
Miscellaneous power plant equipment	12,766	5,601	3,170	2,892	2,298	2,180	1,803	1,487	1,443	1,024	1,015
Total other production plant	2,420,548	2,109,240	1,646,721	1,332,483	903,640	595,283	369,261	233,104	191,919	152,433	141,838
Total production plant	46,203,727	40,659,966	36,084,426	33,034,987	30,317,408	27,938,348	26,118,205	24,310,408	23,475,503	22,456,840	21,545,128

See footnotes at end of table.

TABLE 59 (Continued)

Privately owned class A and class B electric utilities in the United States, electric utility plant— 1963-1973 Continued

[Thousands of dollars]

	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963
Transmission plant:											
Land and land rights	1,644,037	1,529,466	1,403,664	1,233,261	1,100,636	1,004,273	922,335	823,690	753,654	701,552	657,204
Clearing land and rights-of-way	(1)	(1)	(1)	(1)	(1)	(1)	288,362	250,352	223,079	210,043	199,631
Structures and improvements	409,357	379,372	343,209	304,444	273,177	248,984	222,102	196,580	187,439	172,146	162,843
Station equipment	8,037,696	7,397,494	6,782,038	6,098,221	5,350,108	5,001,996	4,607,332	4,109,817	3,904,930	3,624,805	3,481,429
Towers and fixtures	2,769,620	2,599,618	2,219,273	2,015,852	1,727,306	1,526,820	1,285,888	1,072,556	920,765	850,577	783,612
Poles and fixtures	2,219,302	1,985,341	1,837,695	1,645,384	1,524,528	1,396,019	1,218,434	1,115,676	1,036,463	971,193	943,113
Overhead conductors and devices	4,205,736	3,815,391	3,620,142	3,298,462	2,967,759	2,672,575	2,260,617	1,990,521	1,808,924	1,688,148	1,591,254
Underground conduit	447,902	408,631	380,404	346,730	328,774	325,849	294,162	275,565	257,284	238,276	182,667
Underground conductors and devices	608,308	554,253	508,302	473,710	439,191	414,367	378,779	341,891	328,623	293,776	277,996
Roads and trails	36,134	32,693	31,016	28,291	25,901	25,949	20,671	18,708	16,921	16,453	16,138
Total transmission plant	20,380,292	18,802,059	17,225,743	15,444,355	13,937,380	12,616,832	11,478,682	10,255,356	9,438,082	8,766,909	8,295,860
Distribution plant:											
Land and land rights	485,614	453,223	422,658	395,820	377,654	358,143	401,176	379,335	353,057	338,010	319,602
Structures and improvements	509,337	471,708	439,588	418,859	400,644	380,417	358,550	342,839	320,408	309,608	293,838
Station equipment	6,159,499	5,788,422	5,343,142	4,960,796	4,627,698	4,320,570	4,026,785	3,785,518	3,581,145	3,380,762	3,208,472
Storage battery equipment	-	216,606	1	7,451	1	2	165	186	167	456	235
Poles, towers, and fixtures *	5,570,164	5,446,044	5,251,376	4,953,835	4,681,897	4,434,131	4,170,810	3,951,877	3,739,730	3,543,646	3,341,325
Overhead conductors and devices *	5,870,567	5,781,839	5,492,903	5,136,606	4,789,904	4,480,675	4,166,732	3,898,103	3,652,928	3,418,185	3,200,181
Underground conduit *	2,152,618	2,183,229	1,973,291	1,829,867	1,667,049	1,547,400	1,444,559	1,352,761	1,267,657	1,188,812	1,127,866
Underground conductors and devices *	2,854,205	2,863,834	2,538,048	2,257,752	1,944,432	1,757,699	1,560,130	1,424,573	1,310,755	1,224,685	1,155,543
Line transformers *	6,946,938	6,935,243	6,475,689	6,054,432	5,657,134	5,258,894	4,865,464	4,496,848	4,190,522	3,946,538	3,736,110
Services	2,690,717	2,433,896	2,229,186	2,003,934	1,858,950	1,697,108	1,588,810	1,485,281	1,391,077	1,308,548	1,232,021
Meters	2,336,909	2,201,620	2,043,471	1,969,734	1,905,140	1,825,911	1,758,122	1,695,703	1,630,361	1,567,476	1,508,316
Installations on customers' premises	164,536	144,407	123,851	107,511	90,073	78,012	67,842	59,132	49,348	42,274	33,882
Leased property on customers' premises	53,190	48,630	42,608	34,865	28,751	29,252	20,051	15,843	12,298	9,607	6,874
Street lighting and signal systems	1,427,823	1,348,586	1,274,072	1,197,655	1,125,594	1,061,251	1,007,413	950,163	896,825	841,754	788,093
Total distribution plant	39,180,957	36,284,963	33,649,884	31,329,117	29,154,921	27,229,474	25,436,609	23,838,144	22,396,278	21,120,361	19,952,358
General plant:											
Land and land rights	127,016	120,119	116,261	111,677	103,239	98,373	92,623	85,673	82,333	78,370	74,619
Structures and improvements	1,184,521	1,107,226	1,022,958	924,343	876,581	821,902	760,692	725,782	700,945	660,791	626,843
Office furniture and equipment	222,348	209,359	195,130	182,229	175,422	167,973	156,773	147,072	142,157	139,369	134,716
Transportation equipment	551,726	514,930	484,946	449,561	411,715	370,871	340,584	308,068	285,906	264,686	250,712
Stores equipment	40,164	35,928	33,478	30,866	29,224	27,292	25,830	24,280	22,804	21,891	20,841
Tools, shop, and garage equipment	160,550	149,118	138,809	128,002	120,410	115,344	105,736	98,056	87,480	82,649	78,421
Laboratory equipment	68,146	80,785	74,691	69,266	61,589	58,312	56,989	53,632	51,180	48,187	45,762
Power operated equipment	129,107	116,859	96,003	79,477	72,514	61,262	54,390	45,830	39,449	34,062	30,996
Communication equipment	350,437	305,273	278,043	245,908	227,564	203,256	174,260	161,027	151,903	144,090	130,607
Miscellaneous equipment	43,999	39,349	36,491	34,973	31,339	22,049	20,621	19,137	20,385	19,730	19,063
Other tangible property	106,281	91,367	93,166	113,758	112,067	106,980	105,723	102,362	101,441	92,175	90,186
Total general plant	3,004,295	2,770,313	2,569,976	2,370,060	2,221,664	2,053,614	1,894,221	1,770,919	1,685,983	1,586,029	1,502,766
Electric plant purchased and sold—net	1,473	15,392	9,001	9,795	14,160	4,523	3,811	59,755	6,502	954	1,178
Experimental electric plant unclassified	76,983										
Total electric[1] plant in service	108,867,617	96,852,860	89,557,899	82,208,174	75,665,287	69,863,555	64,953,073	60,256,647	57,025,247	53,954,663	51,321,004
Nuclear fuel	1,222,927	1,026,647	851,691	445,570							
Electric plant leased to others	86,134	85,618	79,497	79,296	77,356	81,349	75,616	75,303	75,008	74,461	55,079
Electric plant held for future use	374,106	312,491	252,699	211,263	171,333	150,572	139,126	136,014	126,853	109,934	96,755
Construction work in progress	20,246,160	16,623,072	13,531,190	10,330,078	7,731,386	5,896,496	4,418,300	3,568,809	2,435,853	2,146,452	1,959,653
Electric plant acquisition adjustments	42,746	43,052	26,945	28,205	25,471	25,738	30,617	29,697	39,840	41,078	41,973
Total[2]	130,839,712	16,643,757	104,299,921	93,302,586	83,670,833	76,025,710	69,616,732	64,066,470	59,702,798	56,326,588	53,474,464

[1] Included in other accounts.

[2] Includes undistributed credit of $11,260,000.

* 1972 amounts revised in 1973

SOURCE: FPC, Statistics of Privately Owned, 1973.

TABLE 60

.—Privately owned class A and class B electric utilities in the United States

COMPOSITE INCOME ACCOUNT, YEAR ENDED DECEMBER 31

[Thousands of dollars]

Item	1973 Amount	1973 Percent of revenues	1972 Amount	1972 Percent of revenues
Electricity utility operating income:				
Operating revenues	29,104,494	100.0	26,384,888	100.0
Operation expense	13,184,758	45.2	11,160,403	44.0
Maintenance expense	1,987,652	6.8	1,788,635	7.0
Depreciation expense	2,994,795	10.3	2,657,022	10.5
Amortization	7,376	0	5,138	0
Taxes other than income taxes	2,907,970	10.0	2,851,691	10.5
Income taxes:				
Federal	850,450	2.9	889,062	3.5
Other	113,629	.4	109,793	.4
Provision for deferred income taxes	584,936	1.9	392,082	1.5
Income taxes deferred in prior years—credit	90,503	.3	71,118	.3
Investment tax credit adjustments—(net)	197,392	.7	173,430	.7
Gains from disposition of utility plant	1,320	0	1,087	0
Losses from disposition of utility plant	77	0	151	0
Total operating expenses	22,677,210	77.9	19,715,202	77.8
Electric utility operating income	6,427,284	22.1	6,669,666	22.2
Gas utility operating income:				
Operating revenues	3,920,712	100.0	3,865,558	100.0
Operation expense	2,583,595	58.4	2,600,387	67.3
Maintenance expense	173,759	4.5	161,532	4.2
Depreciation expense	220,802	5.5	210,150	5.4
Amortization	2,248	.1	3,469	.1
Taxes other than income taxes	312,688	8.0	307,224	7.9
Income taxes:				
Federal	49,646	1.2	91,213	2.4
Other	7,966	.2	10,712	.3
Provision for deferred income taxes	31,155	.8	24,722	.6
Income taxes deferred in prior years—credit	5,921	.1	3,201	.1
Investment tax credit adjustments—(net)	12,445	.3	10,608	.3
Total operating expenses	3,488,362	89.0	3,416,807	88.4
Gas utility operating income	432,350	11.0	448,751	11.6
Other utility operating income:				
Operating revenues	288,700	100.0	262,010	100.0
Operation expense	212,860	73.7	183,496	70.0
Maintenance expense	28,721	9.9	24,875	9.5
Depreciation expense	28,942	10.0	20,192	7.7
Amortization	482	.2	482	.2
Taxes other than income taxes	31,555	10.9	27,103	10.3
Income taxes:				
Federal	(16,038)	(5.5)	(5,984)	(2.3)
Other	(784)	(.2)	(603)	(.2)
Provision for deferred income taxes	1,892	.7	1,538	.6
Income taxes deferred in prior years—credit	911	.3	650	.2
Investment tax credit adjustments—(net)	1,579	.5	562	.2
Total operating expenses	288,298	99.9	251,011	95.8
Other utility operating income	402	.1	10,999	4.2
Total utility operating income:				
Operating revenues	33,313,906	100.0	29,482,438	100.0
Operation expense	16,061,211	48.2	13,934,286	47.3
Maintenance expense	2,170,132	6.5	1,948,042	6.6
Depreciation expense	3,244,539	9.9	2,887,364	9.8
Amortization	10,106	0	9,079	0
Taxes other than income taxes	3,252,191	9.8	2,986,018	10.1
Income taxes:				
Federal	884,058	2.5	974,291	3.3
Other	120,811	.4	119,903	.4
Provision for deferred income taxes	597,983	1.7	418,342	1.4
Income taxes deferred in prior years—credit	97,335	.3	74,969	.2
Investment tax credit adjustments—(net)	211,417	.6	184,600	.8
Gains from disposition of utility plant	1,320	0	1,087	0
Losses from disposition of utility plant	77	0	151	0

TABLE 60 (Continued)

—Privately owned class A and class B electric utilities in the United States—Continued

COMPOSITE INCOME ACCOUNT, YEAR ENDED DECEMBER 31

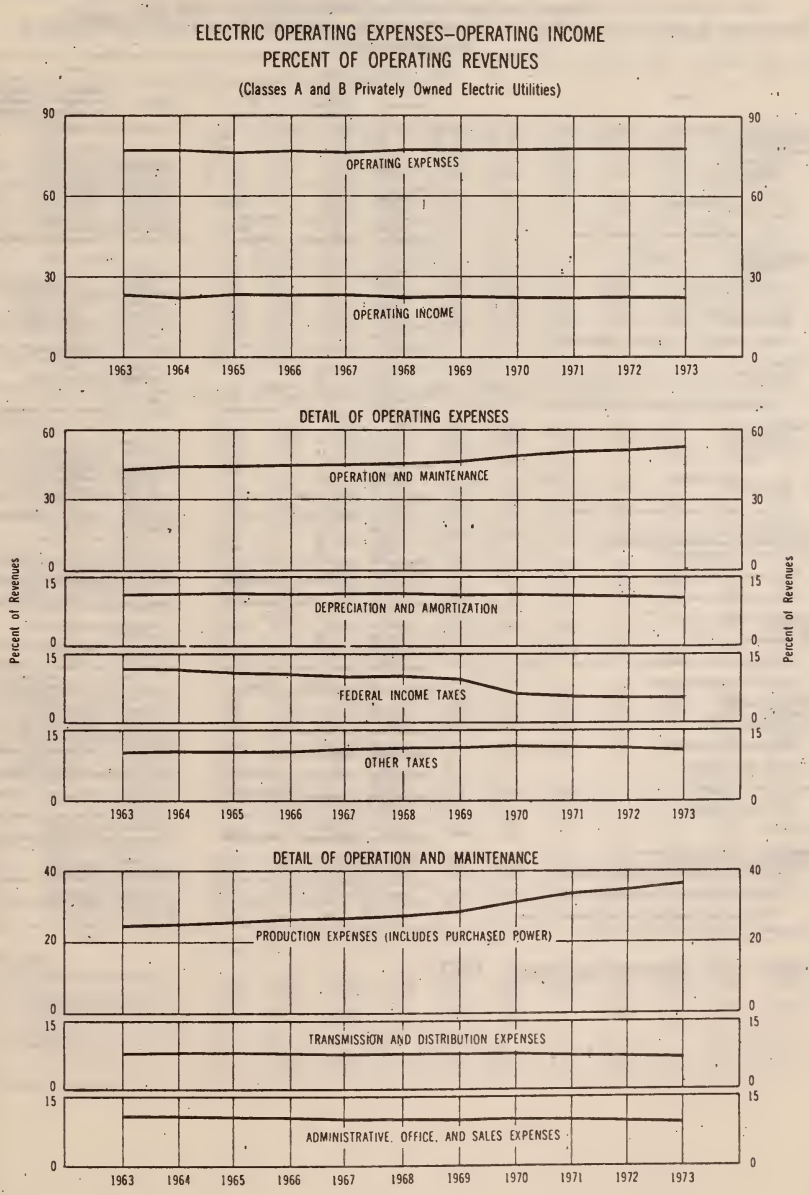
[Thousands of dollars]

Item	1973 Amount	1973 Percent of revenues	1972 Amount	1972 Percent of revenues
Total operating expenses	26,453,870	79.4	23,383,020	79.3
Total utility operating income	6,860,036	20.6	8,099,418	20.7
Other income and deductions:				
Other income:				
Nonutility operating income	1,999	-	13,098	-
Equity in earnings of subsidiary companies 1/	147,637	.4	-	-
Interest and divided income	120,116	.4	148,010	.8
Allowance for funds used during construction	1,237,263	3.7	1,068,682	3.7
Miscellaneous nonoperating income	45,255	.1	84,784	.2
Gain and disposition of property	18,771	.1	10,771	-
Total other income	1,571,041	4.7	1,303,343	4.4
Other income deductions:				
Loss on disposition of property	4,040	-	4,892	-
Miscellaneous amortization	4,670	-	4,847	-
Miscellaneous income deductions	40,508	.1	34,366	.1
Total other income deductions	49,218	.1	44,105	.1
Taxes applicable to other income and deductions:				
Taxes other than income taxes	7,832	-	7,304	-
Income taxes:				
Federal	(66,837)	(.2)	(82,545)	(.2)
Other	(8,236)	-	(6,861)	-
Provision for deferred income taxes	649	-	159	-
Income taxes deferred in prior years—credit	1	-	-	-
Investment tax credit adjustments—(net)	15	-	2	-
Investment tax credits	(4,180)	-	(1,003)	-
Total taxes on other income deductions	(70,758)	(.2)	(82,644)	(.2)
Net other income and deductions	1,592,581	4.8	1,321,882	4.5
Interest charges:				
Interest on long-term debt	3,203,515	9.7	2,817,787	8.6
Amortization of loss on reaquired debt 2/	(10)	-		
Amortization of debt discount and expense	12,662	-	9,826	-
Amortization of premium on debt—credit	7,445	-	8,897	-
Amortization of gain on reaquired debt - Cr. 2/	147,637	.4		
Interest on debt to associated companies	13,063	-	7,851	-
Other interest expense	301,959	.9	175,613	.8
Total interest charges	3,521,449	10.6	3,008,260	10.2
Income before extraordinary items	4,931,168	14.8	4,416,038	15.0
Extraordinary items:				
Extraordinary income	83,838	.3	4,063	-
Extraordinary deductions	191	-	641	-
Net extraordinary items	83,647	.3	3,422	-
Income taxes—Federal and other	29,048	.1	(31)	-
Extraordinary items after taxes	54,599	.2	3,453	-
Net income	4,985,767	15.0	4,419,491	15.0
Dividends declared—preferred stock	790,413	2.4	832,192	2.1
Dividends declared—common stock	2,848,972	8.6	2,584,109	8.7

1/ New accounts in 1973. Commission Order No. 469 issued 2/1/73.
2/ New accounts in 1973. Commission Order No. 505 issued 2/11/74.

SOURCE: FPC, Privately Owned, 1973.

FIGURE 13


ELECTRIC OPERATING EXPENSES–OPERATING INCOME
PERCENT OF OPERATING REVENUES
(Classes A and B Privately Owned Electric Utilities)
OPERATING EXPENSES
OPERATING INCOME
DETAIL OF OPERATING EXPENSES
OPERATION AND MAINTENANCE
DEPRECIATION AND AMORTIZATION
FEDERAL INCOME TAXES
OTHER TAXES
Percent of Revenues
DETAIL OF OPERATION AND MAINTENANCE
PRODUCTION EXPENSES (INCLUDES PURCHASED POWER)
TRANSMISSION AND DISTRIBUTION EXPENSES
ADMINISTRATIVE, OFFICE, AND SALES EXPENSES
1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973

SOURCE: FPC, Privately Owned, 1973.

TABLE 61

–Privately owned class A and class B electric utilities in the United States

COMPOSITE ELECTRIC OPERATION AND MAINTENANCE EXPENSES, YEAR ENDED DECEMBER 31

[Thousands of dollars]

Item	1973			1972		
	Amount	Percent of total expenses	Percent of revenues	Amount	Percent of total expenses	Percent of revenues
Production expenses:						
Steam power:						
Operation:						
Fuel	6,225,064	41.1	21.4	6,074,948	39.3	20.0
Other	628,984	4.2	2.2	680,366	4.4	2.2
Total operation	6,854,046	45.3	23.6	6,636,314	43.7	22.2
Maintenance	617,453	5.4	2.8	728,933	6.8	2.9
Total production expenses, steam power	7,671,501	50.7	26.4	6,362,247	49.3	25.1
Nuclear power:						
Operation:						
Fuel	168,555	1.1	.6	104,867	8	.6
Other	74,745	.5	.2	44,107	4	.2
Total operation	243,300	1.6	.8	148,874	1.2	.7
Maintenance	49,659	.3	.2	31,462	2	.1
Total production expenses nuclear power	293,159	1.9	1.0	180,126	1.4	.8
Hydraulic power:						
Operation	64,973	.4	.2	67,666	.4	.3
Maintenance	36,972	.2	.1	34,769	.3	.1
Total production expenses, hydraulic power	101,945	.6	.3	92,426	.7	.4
Other power:						
Operation:						
Fuel	343,047	2.3	1.2	307,813	2.4	1.2
Other	48,706	.3	.2	44,212	.4	.2
Total operation	391,753	2.6	1.4	351,825	2.6	1.4
Maintenance	66,826	.4	.2	66,405	.4	.2
Total production expenses, other power	458,579	3.0	1.6	407,230	3.2	1.8
Purchased power	1,955,087	12.9	6.7	1,603,697	12.4	6.3
System control and loading dispatching	42,464	.4	.1	37,761	.3	.1
Other power supply expenses	54,245	.4	.2	54,721	.4	.2
Total production expenses	10,576,960	69.9	36.3	8,736,207	67.7	34.6
Mills per kilowatt-hour sold	6.70	–	–	6.97	–	–
Transmission expenses:						
Operation	251,394	1.7	.9	228,358	1.8	.9
Maintenance	159,063	1.0	.5	143,777	1.1	.6
Total transmission expenses	410,457	2.7	1.4	370,135	2.9	1.5
Mills per kilowatt-hour sold	.26	–	–	.25	–	–
Distribution expenses:						
Operation	774,061	5.1	2.7	716,301	5.6	2.8
Maintenance	763,211	5.2	2.7	716,307	5.6	2.8
Total distribution expenses	1,557,292	10.3	5.4	1,431,608	11.1	5.6
Dollars per customer	25.31	–	–	24.13	–	–
Customer accounts expenses	691,650	4.6	2.4	611,711	4.7	2.4
Dollars per customer	11.33	–	–	10.31	–	–
Sales expenses	214,212	1.4	.7	266,864	2.1	1.0
Administrative and general expenses:						
Maintenance of general plant	54,267	.3	.2	50,003	.4	.2
Other administrative and general expenses	1,627,550	10.8	5.6	1,440,611	11.1	6.7
Total administrative and general expenses	1,661,617	11.1	5.6	1,490,614	11.5	6.9
Total electric operation and maintenance expenses	15,132,408	100.0	52.0	12,909,039	100.0	50.9

SOURCE: FPC, Privately Owned, 1973.

TABLE 62

—Privately owned class A and class B electric utilities in the United States, composite electric operation and maintenance expenses— 1963-1973

[Thousands of dollars]

	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963
Power production expenses:											
Steam power:											
Operation:											
Supervision and engineering	87,070	79,848	90,532	84,756	62,750	55,668	51,485	48,804	46,341	44,152	42,124
Fuel	6,225,084	5,074,948	4,366,274	3,566,737	2,908,977	2,615,146	2,336,063	2,210,910	1,979,368	1,872,374	1,750,864
Steam expenses	230,627	213,349	198,661	181,773	158,330	148,117	137,131	127,944	118,659	113,022	108,392
Steam from other sources	6,347	4,433	1,729	1,576	1,591	1,233	978	817	729	760	704
Steam transferred—credit	25,596	27,229	25,591	20,048	17,558	15,211	13,734	13,402	13,751	13,306	14,025
Electric expenses	152,620	144,244	136,250	126,431	116,739	108,390	101,554	96,510	91,634	87,986	86,257
Miscellaneous steam power expenses	167,539	137,797	116,056	100,793	85,517	81,435	73,505	67,108	62,807	59,498	58,018
Rents	10,376	7,826	6,475	5,560	3,205	2,677	2,693	2,631	2,618	2,957	3,134
Station labor	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Supplies and expenses	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Water	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total operation	6,854,048	5,636,314	4,890,386	4,025,578	3,319,551	2,997,455	2,689,675	2,541,322	2,288,405	2,167,443	2,035,278
Maintenance:											
Supervision and engineering	54,390	48,294	43,317	39,651	34,708	31,680	28,749	26,830	26,027	24,705	23,190
Structures	52,753	47,297	37,320	33,258	29,193	27,375	25,555	23,849	23,287	22,458	21,554
Boiler plant	466,961	420,788	367,929	317,561	254,796	228,576	215,333	193,162	169,420	151,104	137,699
Electric plant	209,152	181,376	137,349	120,829	97,129	85,862	82,101	72,338	70,292	65,242	60,348
Miscellaneous steam plant	34,197	29,198	23,848	20,822	18,047	15,560	13,599	12,326	11,188	10,407	9,314
Total maintenance	817,453	726,933	609,863	532,121	433,873	389,053	365,337	328,505	300,204	273,916	252,305
Joint expenses—net	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total production expenses—steam	7,671,501	6,382,247	5,500,249	4,557,699	3,753,424	3,386,508	3,055,012	2,869,827	2,588,609	2,441,359	2,287,583
Nuclear power:											
Operation:											
Supervision and engineering	14,545	8,281	4,764	3,291	2,362	2,236	1,607	1,051	1,019	887	978
Fuel	168,555	104,667	72,845	41,429	27,732	25,066	17,057	14,569	14,152	13,261	12,091
Coolants and water	3,707	2,384	1,394	932	726	618	447	349	304	298	294
Steam expenses	18,403	10,838	7,152	3,809	2,511	2,458	2,025	1,651	1,367	1,308	1,322
Steam from other sources	462	817	781	957	817	968	1,408	1,549	896	52	724
Steam transferred—credit	—	—	—	—	—	—	—	—	—	—	—
Electric expenses	5,471	3,341	2,518	1,370	822	836	607	695	645	635	661
Miscellaneous nuclear power expenses	31,423	18,248	8,637	4,982	2,916	2,791	2,400	1,851	1,798	1,751	1,583
Rents	714	549	385	118	110	132	130	143	111	106	10
Total operation	243,300	148,874	98,456	56,888	37,996	35,105	25,681	21,858	20,292	18,298	17,663
Maintenance:											
Supervision and engineering	5,238	3,681	1,496	1,152	904	732	584	351	329	329	286
Structures	3,380	4,309	892	716	460	560	392	278	292	252	246
Reactor plant equipment	23,257	12,425	6,699	4,381	2,616	2,872	2,563	1,828	1,461	1,664	1,646
Electric plant	13,271	8,291	5,314	2,527	1,522	703	502	323	497	509	382
Miscellaneous nuclear plant	4,713	2,748	1,177	622	397	449	236	212	171	174	163
Total maintenance	49,859	31,482	15,578	9,398	5,899	5,316	4,277	2,992	2,740	2,928	2,723
Total production expenses—nuclear	293,159	180,126	114,034	66,286	43,895	40,421	29,958	24,850	23,032	21,226	20,386
Hydraulic power:											
Operation:											
Supervision and engineering	6,264	5,888	5,492	5,230	4,909	4,713	4,409	4,251	3,998	3,944	3,702
Water for power	9,285	7,852	8,012	7,264	7,770	7,158	4,958	6,457	6,772	5,073	4,821
Hydraulic expenses	9,537	8,372	7,628	6,670	6,355	5,590	5,200	4,441	4,226	4,179	4,006
Electric expenses	18,991	18,218	17,279	16,421	16,025	15,198	14,638	14,420	14,360	14,358	14,228
Miscellaneous hydraulic power expenses	8,607	7,807	7,312	6,730	6,171	5,719	5,876	5,931	5,332	5,192	4,960
Rents	12,289	9,482	8,378	8,160	8,119	7,229	7,939	7,501	6,881	6,074	4,884
Station labor	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Supplies and expenses	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total operation	64,973	57,668	54,101	50,475	49,409	45,607	43,020	43,001	41,569	38,820	36,601
Maintenance:											
Supervision and engineering	3,914	3,749	3,297	2,967	2,789	2,595	2,354	2,311	2,227	2,135	2,092
Structures	3,565	3,646	2,917	2,872	2,594	2,569	2,546	2,529	2,906	2,514	2,484
Reserves, dams and waterways	10,953	10,606	8,498	7,984	7,198	8,142	6,908	6,841	7,144	6,660	6,110
Electric plant	15,102	13,966	12,094	9,916	9,399	8,783	7,688	7,136	6,838	7,116	6,403
Miscellaneous hydraulic plant	3,438	2,792	2,546	2,901	2,790	1,972	1,755	1,494	1,592	1,451	1,451
Total maintenance	36,972	34,759	29,452	26,640	24,770	24,061	21,251	20,311	20,707	19,876	18,540
Joint expenses—net	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total production expenses—hydraulic	101,945	92,425	83,553	77,115	74,179	69,668	64,271	63,312	62,276	58,696	55,141
Other power:											
Operation:											
Supervision and engineering	3,425	2,337	1,647	940	663	471	448	321	266	265	238
Fuel	343,047	307,613	218,065	145,035	64,866	29,935	11,981	6,429	3,828	2,203	1,930
Generation expenses	10,125	8,828	6,874	4,567	3,063	2,240	1,706	1,592	1,429	1,118	1,068
Miscellaneous other power expenses	1,519	1,773	2,621	1,410	1,029	905	679	638	634	606	600
Rents	23,627	31,274	17,831	1,160	77	155	61	29	25	29	34
Station labor	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Supplies and expenses	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total operation	391,753	351,825	247,038	153,112	69,703	33,706	14,875	9,009	6,182	4,221	3,870

See footnotes at end of table.

TABLE 62 (Continued)

–Privately owned class A and class B electric utilities in the United States, composite electric operation and maintenance expenses— 1963-1973—Continued

[Thousands of dollars]

	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963
Maintenance:											
Supervision and engineering	3,376	2,427	1,097	674	407	295	248	178	169	151	128
Structures	1,784	1,224	842	589	380	235	189	197	130	149	135
Generating and electric plant	60,702	51,108	30,591	18,023	9,574	3,992	2,962	1,728	1,289	1,071	866
Miscellaneous other power plant	964	545	451	420	350	205	122	102	90	73	70
Total maintenance	66,826	55,406	32,981	19,706	10,711	4,727	3,521	2,205	1,669	1,444	1,199
Joint expenses—net	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total production expenses—other power	458,579	407,230	280,019	172,818	80,414	38,433	18,396	11,214	7,851	5,665	5,069
Other power supply expenses:											
Purchased power	1,955,087	1,603,897	1,426,106	1,234,409	1,128,338	960,954	864,144	794,672	702,760	623,214	593,657
System control and load dispatching	42,464	37,781	32,878	30,631	23,373	19,628	16,929	14,975	13,706	12,230	11,156
Other expenses	54,245	84,721	27,721	5,484	10,232	3,996	2,093	4,443	3,561	2,822	2,476
Joint expenses—net	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total other power supply expenses	2,051,796	1,898,179	1,486,705	1,270,524	1,161,943	984,578	883,166	814,090	720,027	637,966	607,289
Total power production expenses	10,576,980	8,738,207	7,464,560	6,144,442	5,113,855	4,519,608	4,050,803	3,783,293	3,401,795	3,164,912	2,975,458
Transmission expenses:											
Operation:											
Supervision and engineering	37,770	33,880	30,727	28,447	25,354	23,223	21,844	20,001	18,971	17,819	16,471
Load dispatching	29,141	26,419	23,799	21,483	19,922	18,566	16,696	15,533	14,770	14,092	13,415
Station expenses	54,499	50,521	46,097	42,437	39,681	36,428	34,613	32,965	31,054	30,307	29,817
Overhead line expenses	12,032	11,086	10,387	9,939	9,106	9,011	8,545	7,880	7,715	8,290	6,110
Underground line expenses	1,579	1,903	1,779	1,819	1,384	1,330	1,272	1,300	1,200	1,145	1,184
Transmission of electricity by others	63,813	84,261	47,645	42,290	36,475	26,021	16,960	12,369	10,553	9,792	8,025
Miscellaneous transmission expenses	18,480	16,240	11,123	8,737	7,607	7,158	6,468	6,039	5,170	4,837	4,776
Rents	34,080	31,848	26,974	19,469	17,545	16,797	14,534	12,555	11,521	11,228	11,073
Total operation	251,394	228,358	198,631	174,603	157,074	138,534	121,102	108,642	100,954	97,470	92,880
Maintenance:											
Supervision and engineering	15,276	13,622	12,100	11,532	10,516	9,600	8,974	8,853	8,272	7,944	7,596
Structures	4,403	3,787	2,960	2,623	2,753	2,301	2,282	2,305	2,256	2,239	2,225
Station equipment	64,661	57,742	49,150	43,935	38,467	35,218	32,037	31,467	29,119	27,813	25,764
Overhead lines	67,349	61,744	54,121	63,278	47,323	42,733	41,054	39,604	37,450	36,831	34,076
Underground lines	5,609	5,492	3,738	3,227	3,233	2,668	2,851	2,667	2,774	2,164	1,966
Miscellaneous transmission plant	1,765	1,390	2,102	1,845	2,777	635	630	522	538	387	344
Roads and trails	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total maintenance	159,063	143,777	124,171	116,440	106,069	93,145	87,828	85,418	80,420	77,378	71,974
Joint expense—net	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total transmission expenses	410,457	370,135	322,702	291,043	263,143	231,679	208,730	194,060	181,374	174,848	164,854
Distribution expenses:											
Operation:											
Supervision and engineering	110,229	103,968	97,636	91,498	84,080	77,189	74,362	68,942	66,290	62,614	59,213
Load dispatching	14,525	13,042	11,307	10,041	8,750	8,115	7,788	7,205	6,846	6,825	6,330
Station expenses	52,392	74,368	70,009	66,671	61,218	57,871	54,946	51,860	49,894	49,008	47,871
Overhead line expenses	109,105	103,310	97,110	94,324	86,355	77,704	69,493	64,886	62,097	59,690	56,544
Underground line expenses	30,780	27,987	23,839	23,324	20,374	17,549	16,625	15,547	15,292	13,746	13,033
Street lighting and signal system expenses	28,363	28,467	27,341	26,028	23,788	23,008	22,267	21,980	22,431	22,431	21,697
Meter expenses	111,915	107,009	99,498	94,215	87,998	82,620	80,045	75,406	72,656	69,939	67,625
Customer installations expenses	117,679	108,560	96,479	95,609	86,282	84,856	78,199	75,543	73,026	73,336	67,811
Miscellaneous distribution expenses	132,812	117,318	105,229	99,477	88,636	80,951	76,896	70,558	64,669	61,909	58,587
Distribution office expenses	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Rents	36,281	34,308	31,354	26,523	25,460	23,401	23,813	23,236	22,665	20,745	20,281
Total operations	774,081	718,301	659,792	627,910	572,941	532,731	504,434	475,163	455,566	440,243	418,992
Maintenance:											
Supervision and engineering	59,587	54,982	51,712	48,840	44,611	40,513	38,357	35,652	34,213	32,931	31,009
Structures	8,835	8,346	7,898	7,903	6,902	6,570	6,653	6,758	6,298	6,255	6,150
Station equipment	72,505	88,011	61,359	57,301	51,560	45,721	44,479	42,855	41,612	39,773	37,978
Overhead lines	464,546	425,919	395,174	377,347	343,472	317,997	300,427	279,626	267,738	251,804	226,692
Underground lines	76,388	66,028	55,850	51,163	42,474	37,265	36,184	33,895	30,853	34,145	33,872
Line transformers	41,891	37,467	36,162	33,899	31,359	29,865	27,689	26,196	25,090	25,039	24,302
Street lighting and signal systems	30,715	27,490	25,855	24,171	22,182	20,309	19,402	18,447	17,931	17,492	16,783
Meters	19,013	18,474	17,493	16,956	15,796	15,255	14,487	13,787	13,786	13,501	12,941
Miscellaneous distribution plant	9,731	9,890	7,849	7,666	7,716	3,718	3,298	2,941	2,771	2,295	1,982
Installed and leased property on customers' premises	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Services	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total maintenance	783,211	736,307	659,352	625,246	566,072	517,222	490,976	460,157	440,292	423,235	391,706
Joint expenses—net	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total distribution expenses	1,557,292	1,431,608	1,319,144	1,253,156	1,139,013	1,049,953	995,410	935,320	895,858	863,478	810,698
Customer accounts expenses:											
Supervision	32,570	29,311	27,845	25,972	23,935	22,895	21,343	19,750	18,832	18,580	18,074
Meter reading	134,824	122,402	110,272	102,329	93,559	86,396	81,145	77,296	73,355	70,213	67,381
Customer records and collection expenses	421,204	378,852	347,814	313,964	287,149	266,950	249,537	239,012	232,039	227,009	217,267
Uncollectible accounts	82,650	63,244	54,292	46,449	32,366	30,115	28,219	26,942	24,297	24,016	21,408

See footnotes at end of table.

TABLE 62 (Continued)

-Privately owned class A and class B electric utilities in the United States, composite electric operation and maintenance expenses— 1963-1973 -Continued

[Thousands of dollars]

	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963
Miscellaneous customer accounts expenses	20,402	17,602	15,223	12,855	12,148	11,830	11,103	13,243	13,188	11,795	11,464
Rents	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total customer accounts expenses	691,650	811,711	555,446	501,569	449,157	417,886	391,347	376,243	361,711	351,613	335,594
Sales expenses:											
Supervision	25,789	30,073	30,861	30,359	29,210	27,367	25,891	24,836	23,280	22,004	21,610
Demonstration and selling	135,496	168,741	180,328	177,278	172,916	161,669	152,429	145,260	134,283	124,965	111,729
Advertising	30,097	43,692	53,706	67,040	70,844	67,882	64,558	63,266	57,535	53,699	50,488
Revenue from merchandising jobbing and contract work	-	(50,206)	(52,209)	(50,399)	(54,719)	(55,928)	(49,400)	(47,223)	(43,868)	(40,597)	(37,826)
Cost and expenses of merchandising, jobbing and contract work	- 2/	48,878	52,064	50,930	55,048	55,142	49,478	47,280	44,522	41,711	39,124
Miscellaneous sales expenses	22,830	26,686	26,676	31,178	31,591	33,062	30,721	29,869	26,184	23,646	22,907
Rents	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total sales expenses	214,212	268,884	291,426	306,386	304,890	289,194	273,777	263,288	240,936	225,458	208,032
Administrative and general expenses:											
Operation:											
Administrative and general salaries	546,741	488,939	442,255	402,152	364,848	338,877	314,693	298,378	287,280	275,055	262,162
Office supplies and expenses	196,852	171,348	156,260	139,764	118,306	108,799	98,249	91,313	84,581	78,811	73,158
Administrative expenses trans. —credit	105,837	94,652	82,489	71,661	62,764	56,669	51,115	44,618	45,724	41,332	38,611
Outside service employed	80,463	66,163	58,783	52,336	43,888	38,044	38,581	32,872	28,787	29,378	27,074
Property insurance	72,128	68,376	55,388	41,871	34,553	29,408	28,207	25,944	31,143	23,822	24,398
Injuries and damages	72,129	65,022	52,218	46,363	38,865	35,161	31,992	31,533	30,411	29,842	26,847
Employee pensions and benefits	488,069	448,842	390,650	350,001	315,383	280,937	275,888	274,145	269,549	250,006	236,025
Franchise requirements	35,437	32,020	29,225	24,368	22,089	20,489	18,745	18,027	17,107	16,447	15,462
Regulatory commission expenses	27,163	25,311	16,152	12,225	8,853	6,753	5,328	4,487	4,444	4,004	3,411
Duplicate charges—credit	20,874	16,865	14,891	10,512	10,114	9,870	8,815	7,922	7,584	7,313	6,677
Miscellaneous general expenses	194,807	161,182	114,651	104,194	98,437	95,493	90,546	87,814	85,909	87,356	86,218
Rents	40,472	38,855	32,403	29,672	26,402	23,327	21,360	20,906	19,779	19,215	19,932
Total operation	1,627,550	1,440,611	1,269,605	1,120,773	998,746	910,749	863,759	832,880	805,582	765,290	729,399
Maintenance of general plant	54,267	50,003	44,993	42,248	35,553	32,416	30,944	29,283	29,212	27,252	24,871
Joint expenses—net	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Total administrative and general expenses	1,681,817	1,490,614	1,304,598	1,163,021	1,034,299	943,165	894,703	862,163	834,894	792,542	754,270
Total electric operation and maintenance expenses	15,132,408	12,909,039	11,257,876	9,659,617	8,304,357	7,451,485	6,814,770	6,414,367	5,916,568	5,572,851	5,248,916

[1] Included in other accounts.

[2] Eliminated by Commission Order No. 460, dated 11/13/72 to be effective 1-1-73.

a. Includes Alaska and Hawaii.

SOURCE: FPC, Statistics of Privately Owned, 1973.

TABLE 63

–Electric operation and maintenance expense relationships– 1963-1973

Relationship	Year ended Dec. 31—										
	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963
Operation and maintenance expenses--percent of operating revenues	52.0	50.9	50.4	48.8	46.1	45.1	44.8	44.7	44.2	44.0	43.7
Maintenance charges:											
Percent of total operation and maintenance expenses	13.0	13.6	13.5	14.2	14.2	14.3	14.7	14.5	14.8	14.8	14.5
Percent of operating revenues	6.8	6.9	6.8	6.9	6.6	6.4	6.6	6.5	6.5	6.5	6.4
Maintenance and depreciation charges—percent of operating revenues	17.1	17.4	17.6	18.0	17.7	17.7	17.9	17.7	17.9	17.8	17.6
Production expenses:											
Percent of operating revenues	36.3	34.5	33.4	31.0	28.4	27.3	26.6	26.3	25.4	25.0	24.8
Per kilowatt-hour sold, mills	6.70	6.97	5.49	4.76	4.21	4.09	4.03	4.01	3.98	4.00	4.00
Transmission expenses:											
Percent of operating revenues	1.4	1.4	1.4	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.4
Per kilowatt-hours sold, mills	0.26	0.25	0.24	0.23	0.22	0.21	0.21	0.21	.021	0.22	0.22
Distribution expenses:											
Percent of operating revenues	5.4	5.6	5.9	6.3	6.3	6.3	6.5	6.5	6.7	6.8	6.7
Per customer	$25.51	$24.13	$22.82	$22.14	$20.56	$19.31	$18.67	$17.84	$17.48	$17.18	$16.36
Customer accounts expenses:											
Percent of operating revenues	2.4	2.4	2.5	2.5	2.5	2.5	2.6	2.6	2.7	2.8	2.8
Per customer	$11.33	$10.31	$9.61	$8.86	$8.11	$7.68	$7.34	$7.18	$7.06	$6.99	$6.77
Sales expenses--percent of operating revenues	.73	1.1	1.3	1.5	1.7	1.7	1.8	1.8	1.8	1.8	1.7
Administrative and general expenses—percent of operating revenues	5.8	5.9	5.8	5.9	5.7	5.7	5.9	6.0	6.2	6.3	6.3

SOURCE: FPC, Statistics of Privately Owned, 1973.

TABLE 64

ANALYSIS OF FUEL FOR ELECTRIC GENERATION—TOTAL ELECTRIC UTILITY INDUSTRY

FUEL BURNED UNDER BOILERS AND BY INTERNAL COMBUSTION ENGINES

1971-1974 BY REGIONS

Region	Year	Composite Averages: Cost per Million Btu Consumed	Composite Averages: Cost of Fuel per Net Kwhr	Composite Averages: Btu per Net Kwhr	Coal (a): Cost per Million Btu Consumed	Coal (a): Cost per ton	Coal (a): Btu per pound	Oil (b): Cost per Million Btu Consumed	Oil (b): Cost per Bbl	Oil (b): Btu per Gallon	Gas (c): Cost per Million Btu Consumed	Gas (c): Cost per M Cu Ft	Gas (c): Btu per Cu Ft
United States	1974	89.0¢	0.93¢	10 481	67.8¢	$14.81	10 925	183.2¢	$11.21	145 719	50.1¢	51.2¢	1 022
	1973	48.4	0.50	10 429	41.9	9.32	11 130	78.3	4.77	145 225	35.2	36.0	1 024
	1972	41.1	0.43	10 479	38.4	8.69	11 321	62.1	3.78	144 933	31.1	31.9	1 027
	1971	37.5	0.40	10 536	36.3	8.18	11 265	55.5	3.41	146 489	29.1	29.9	1 025
New England	1974	177.3	1.91	10 786	110.3	28.08	12 734	186.4	11.48	146 648	140.1	140.2	1 001
	1973	70.5	0.76	10 749	52.5	14.12	13 450	71.7	4.38	145 483	57.9	57.9	1 001
	1972	56.8	0.61	10 830	47.3	13.48	14 261	60.5	3.69	145 119	41.1	41.1	1 001
	1971	49.5	0.55	11 018	39.4	10.78	13 666	54.3	3.37	147 710	43.5	43.6	1 003
Middle Atlantic	1974	135.1	1.46	10 831	81.8	19.13	11 687	199.3	12.03	143 698	111.8	115.4	1 033
	1973	63.7	0.69	10 769	47.5	11.41	12 016	82.8	5.00	143 619	63.4	65.2	1 029
	1972	53.6	0.59	10 936	42.4	10.46	12 342	65.0	3.93	144 010	55.7	57.3	1 029
	1971	49.1	0.54	11 063	41.0	9.84	11 991	59.8	3.64	145 074	46.1	47.5	1 031
East North Central	1974	73.6	0.77	10 426	66.2	14.34	10 829	181.5	10.83	142 019	77.7(d)	71.9	925(d)
	1973	45.6	0.47	10 357	42.7	9.46	11 065	85.1	5.13	143 468	58.7(d)	52.8	901(d)
	1972	41.3	0.43	10 392	38.7	8.61	11 118	73.1	4.40	143 471	52.3(d)	48.7	932(d)
	1971	37.6	0.39	10 475	35.4	7.83	11 042	68.7	4.22	146 192	43.4(d)	40.4	931(d)
West North Central	1974	47.2	0.53	11 205	46.1(e)	9.40	10 202(e)	143.4	8.70	144 413	41.7	41.3	990
	1973	37.7	0.42	11 260	37.8(e)	7.75	10 251(e)	87.8	5.30	143 793	34.6	34.3	993
	1972	33.6	0.39	11 571	34.2(e)	7.08	10 341(e)	73.4	4.45	144 445	30.0	29.8	992
	1971	31.5	0.36	11 343	32.8(e)	6.76	10 310(e)	74.8	4.70	149 529	28.3	28.2	996
South Atlantic	1974	113.1	1.16	10 248	89.0	20.75	11 661	173.5	10.77	147 749	61.2	62.3	1 017
	1973	52.1	0.53	10 147	45.9	10.95	11 945	66.2	4.07	146 363	46.0	46.9	1 019
	1972	45.2	0.46	10 168	42.7	10.19	11 921	52.1	3.18	145 276	39.7	40.3	1 017
	1971	42.7	0.44	10 266	41.9	9.92	11 822	46.1	2.85	147 199	39.9	40.5	1 016
East South Central	1974	60.7	0.61	10 060	55.9	12.21	10 923	182.8	11.07	144 211	53.8	56.2	1 045
	1973	39.9	0.40	9 959	38.4	8.48	11 044	97.0	5.82	142 970	37.9	39.2	1 035
	1972	34.3	0.34	10 014	33.9	7.55	11 135	73.1	4.35	141 765	30.7	31.9	1 038
	1971	30.6	0.31	9 968	30.7	6.79	11 063	73.8	4.45	143 696	28.0	29.1	1 040
West South Central	1974	51.0	0.53	10 410	18.1	2.53	7 001	181.4	11.15	146 344	43.8	45.1	1 028
	1973	31.6	0.33	10 457	13.8	1.93	7 002	89.2	5.54	147 830	28.5	29.4	1 032
	1972	25.3	0.26	10 440	21.6	3.03	7 003	69.1	4.28	147 276	24.4	25.2	1 034
	1971	22.3	0.23	10 480	21.4	3.14	7 328	59.9	3.74	148 782	21.9	22.7	1 036
Mountain	1974	45.8	0.50	10 906	28.0	5.37	9 572	166.8	10.27	146 587	50.9	52.6	1 035
	1973	34.9	0.38	11 039	24.3	4.63	9 518	96.3	5.82	143 823	38.7	39.0	1 009
	1972	28.4	0.31	10 901	21.9	4.17	9 514	60.3	3.74	147 499	34.7	35.1	1 013
	1971	26.0	0.28	10 814	20.3	3.82	9 400	37.8	2.39	150 434	32.7	33.2	1 014
Pacific	1974	128.4	1.32	10 261	42.1(f)	6.49	7 712(f)	186.3	11.41	145 856	60.2	64.1	1 065
	1973	65.6	0.66	10 105	39.0(f)	5.95	7 619(f)	91.7	5.62	146 022	42.9	45.5	1 061
	1972	49.4	0.50	10 026	17.4(f)	3.92	11 288(f)	77.6	4.79	147 022	37.8	40.0	1 060
	1971	41.9	0.42	10 056	19.4(f)	4.38	11 265(f)	61.5	3.79	146 662	34.8	37.0	1 063
Alaska	1974	85.1	1.49	17 460	81.6	14.20	8 700	237.0	13.44	134 999	—	—	—
	1973	Not reported											
	1972	75.4	1.20	15 949	67.5	11.74	8 700	133.1	7.52	134 563	—	—	—
	1971	Not reported											
Hawaii	1974	84.8	0.91	10 771	—	—	—	84.8	5.31	149 181	—	—	—
	1973	66.8	0.72	10 852	—	—	—	66.8	4.19	149 191	—	—	—
	1972	53.4	0.58	10 900	—	—	—	53.4	3.34	148 917	—	—	—
	1971	47.2	0.56	11 912	—	—	—	47.2	2.97	150 144	—	—	—

(a) Coal includes bituminous and anthracite coal and relatively small amounts of coke, lignite, and wood.
(b) Oil includes fuel oil, crude oil, and small amounts of tar and gasoline.
(c) Gas includes natural and manufactured gas and waste gas.
(d) Includes blast furnace gas.
(e) Includes screenings.
(f) Cords and cubic feet of hogged wood, where used, are converted to thermal equivalent pounds and tons of coal at U. S. average Btu per pound.

SOURCE: EEI, Statistical Year Book, 1974.

TABLE 65

ANALYSIS OF FUEL FOR ELECTRIC GENERATION—TOTAL ELECTRIC UTILITY INDUSTRY

FUEL BURNED UNDER BOILERS AND BY INTERNAL COMBUSTION ENGINES

1974 BY STATES

	Composite Averages			Coal (a)			Oil (b)			Gas (c)		
	Cost per Million Btu Consumed	Cost of Fuel per Net Kwhr	Btu per Net Kwhr	Cost per Million Btu Consumed	Cost per Ton	Btu per Pound	Cost per Million Btu Consumed	Cost per Bbl	Btu per Gallon	Cost per Million Btu Consumed	Cost per M Cu Ft	Btu per Cu Ft
Total United States	**89.0¢**	**0.93¢**	**10 481**	**67.8¢**	**$14.81**	**10 925**	**183.2¢**	**$11.21**	**145 719**	**50.1¢**	**51.2¢**	**1 022**
Maine	147.7	1.68	11 389	—	—	—	147.7	9.18	147 992	—	—	—
New Hampshire	115.6	1.29	11 162	81.9	21.97	13 408	186.4	11.53	147 279	86.3	86.3	1 000
Vermont	97.9	1.48	15 157	101.1	27.30	13 500	161.5	9.33	137 496	56.5	56.5	1 000
Massachusetts	180.3	1.87	10 369	138.2	33.63	12 165	185.1	11.38	146 362	156.5	156.6	1 001
Rhode Island	178.8	2.27	12 688	156.2	37.80	12 100	184.3	11.65	150 520	162.1	162.4	1 002
Connecticut	192.1	2.13	11 105	114.9	28.07	12 216	194.6	11.98	146 577	76.6	76.6	1 000
New England	*177.3*	*1.91*	*10 786*	*110.3*	*28.08*	*12 734*	*186.4*	*11.48*	*146 648*	*140.1*	*140.2*	*1 001*
New York	172.1	1.88	10 952	100.9	23.48	11 642	196.6	11.94	144 529	128.1	132.9	1 038
New Jersey	176.4	1.96	11 123	120.4	29.05	12 064	201.1	12.03	142 398	69.8	71.8	1 029
Pennsylvania	93.3	0.99	10 649	74.7	17.42	11 662	206.3	12.37	142 776	113.0	114.8	1 015
Middle Atlantic	*135.1*	*1.46*	*10 831*	*81.8*	*19.13*	*11 687*	*199.3*	*12.03*	*143 698*	*111.8*	*115.4*	*1 033*
Ohio	83.7	0.86	10 280	79.8	17.33	10 852	213.7	12.72	141 693	74.2	72.1	971
Indiana	49.3	0.50	10 133	48.8	10.46	10 725	156.9	9.20	139 595	55.5	55.7	1 003
Illinois	65.9	0.71	10 706	55.3	11.24	10 158	168.2	10.12	143 229	79.4	81.1	1 022
Michigan	89.9	0.93	10 313	72.7	17.38	11 954	183.0	10.86	141 343	97.0(d)	77.8	802(d)
Wisconsin	69.5	0.77	11 155	69.3	15.53	11 213	162.0	9.48	139 362	57.5	58.1	1 010
East North Central	*73.6*	*0.77*	*10 426*	*66.2*	*14.34*	*10 829*	*181.5*	*10.83*	*142 019*	*77.7(d)*	*71.9*	*926(d)*
Minnesota	51.9	0.58	11 212	46.8	8.85	9 444	145.1	8.81	144 591	49.4	47.4	959
Iowa	55.6	0.65	11 683	56.8	11.81	10 390	175.7	10.15	137 531	49.3	49.9	1 012
Missouri	44.0	0.47	10 632	43.3	9.35	10 813	153.9	9.16	141 798	44.4	43.2	974
North Dakota	31.4	0.47	14 812	31.4(e)	4.32	6 881(e)	91.3	5.29	137 943	38.5	39.7	1 030
South Dakota	52.1	0.80	15 401	48.2(e)	7.75	8 034(e)	124.3	7.79	149 166	48.8	48.8	999
Nebraska	54.6	0.59	10 877	56.6	12.23	10 797	121.0	7.45	146 697	48.7	47.9	983
Kansas	40.6	0.47	11 688	37.2	7.68	10 328	141.5	8.63	145 110	35.0	34.8	996
West North Central	*47.2*	*0.53*	*11 205*	*46.1(e)*	*9.40*	*10 202(e)*	*143.4*	*8.70*	*144 413*	*41.7*	*41.3*	*990*
Delaware, Maryland, District of Columbia	158.2	1.69	10 668	114.9	26.93	11 715	185.9	11.68	149 579	60.6	61.3	1 012
Virginia	142.0	1.49	10 511	113.1	26.69	11 793	161.3	10.04	148 227	60.7	62.5	1 029
West Virginia	80.7	0.79	9 731	80.5	18.50	11 492	228.6	13.07	136 883	—	—	—
North Carolina	101.3	0.98	9 684	96.5	22.67	11 740	172.5	10.53	145 310	79.4	81.7	1 028
South Carolina	104.8	1.09	10 376	110.6	26.22	11 851	108.6	6.73	147 504	68.4	70.3	1 029
Georgia	87.3	0.95	10 860	73.6	17.46	11 859	199.8	11.85	141 157	58.7	60.4	1 029
Florida	128.4	1.35	10 483	70.6	16.17	11 451	173.9	10.72	146 752	60.9	61.6	1 012
South Atlantic	*113.1*	*1.16*	*10 248*	*89.0*	*20.76*	*11 661*	*173.5*	*10.77*	*147 749*	*61.2*	*62.3*	*1 017*
Kentucky	49.4	0.49	9 928	49.5	10.52	10 619	163.0	9.59	140 000	40.9	41.9	1 024
Tennessee	50.4	0.49	9 765	49.8	10.67	10 718	190.9	11.37	141 782	—	—	—
Alabama	68.9	0.71	10 228	67.6	15.43	11 421	187.1	10.90	138 782	109.4	114.8	1 049
Mississippi	108.1	1.20	11 105	65.3	14.99	11 482	182.2	11.08	144 767	50.8	53.2	1 048
East South Central	*60.7*	*0.61*	*10 060*	*55.9*	*12.21*	*10 923*	*182.8*	*11.07*	*144 211*	*53.8*	*56.2*	*1 045*
Arkansas	106.8	1.17	10.968	—	—	—	169.5	10.72	150 571	40.2	40.6	1 009
Louisiana	67.9	0.72	10 586	—	—	—	209.5	12.71	144 406	44.3	46.9	1 058
Oklahoma	39.3	0.41	10 347	40.9	9.45	11 548	110.3	6.62	142 881	39.3	40.9	1 041
Texas	45.8	0.47	10 349	18.1	2.53	7 000	150.7	9.14	144 410	44.8	45.7	1 019
West South Central	*51.0*	*0.53*	*10 410*	*18.1*	*2.53*	*7 001*	*181.4*	*11.16*	*146 344*	*43.8*	*45.1*	*1 028*
Montana	35.7	0.45	12 694	34.8	4.51	6 471	116.6	7.08	144 713	33.1	36.6	1 103
Idaho	128.2	1.69	13 169	—	—	—	210.2	11.92	135 015	80.7	85.1	1 054
Wyoming	23.1	0.25	10 905	22.1	3.73	8 447	101.1	5.94	139 901	27.0	29.1	1 078
Colorado	46.3	0.53	11 365	39.9	7.86	9 849	211.3	13.13	147 990	42.8	42.8	999
New Mexico	33.6	0.36	10 736	21.1	3.76	8 889	171.0	10.32	143 679	49.0	50.6	1 033
Arizona	80.7	0.84	10 398	23.1	5.01	10 827	165.2	10.20	147 021	53.4	57.5	1 076
Utah	39.3	0.46	11 593	35.5	8.45	11 907	150.4	8.89	140 757	40.7	38.2	940
Nevada	49.0	0.54	11 004	35.0	7.83	11 186	154.9	9.64	148 198	69.7	74.6	1 070
Mountain	*46.8*	*0.50*	*10 906*	*28.0*	*6.37*	*9 572*	*166.8*	*10.27*	*146 587*	*50.9*	*52.6*	*1 035*
Washington	44.1	0.46	10 419	42.9	6.57	7.641	236.3	14.48	145 912	—	—	—
Oregon	87.7	1.90	21 715	12.1(f)	2.65	10 944(f)	198.6	11.46	137 411	151.4	157.2	1 038
California	132.6	1.36	10 238	—	—	—	186.3	11.41	145 866	60.0	63.9	1 065
Pacific	*128.4*	*1.32*	*10 261*	*42.1(f)*	*6.49*	*7 712(f)*	*186.3*	*11.41*	*145 856*	*60.2*	*64.1*	*1 065*
Alaska	85.1	1.49	17 460	81.6	14.20	8 700	237.0	13.44	134 999	—	—	—
Hawaii	84.8	0.91	10 771	—	—	—	84.8	5.31	149 181	—	—	—

SOURCE: EEI, Statistical Year Book, 1874.

TABLE 66

COMPOSITE BALANCE SHEET

486 Municipal Electric Utilities
Year 1974

	Amounts	Percent of Total Assets/Liabilities
Assets and Other Debits:		
Intangible Plant	$ 20,309,017	.1
Production Plant:		
Steam	$ 2,945,538,305	21.5
Hydraulic	1,015,897,564	7.4
Internal Combustion Engine	395,610,546	2.9
Total Production Plant	$ 4,357,046,415	31.8
Transmission Plant	1,122,984,267	8.2
Distribution Plant	4,898,604,326	35.7
General Plant	701,270,456	5.1
Total Electric Plant in Service	$ 11,100,414,481	80.9
Electric Plant Leased to Others	$ 148,124,636	1.1
Construction Work in Progress	1,849,833,983	13.5
Electric Plant Held for Future Use	7,326,516	.1
Electric Plant Acquisition Adjustments	23,300,751	.2
Total Electric Utility Plant	$ 13,129,000,367	95.8
Accumulated Provision for Depreciation and Amortization	3,656,858,507	26.7
Net Electric Utility Plant	$ 9,472,141,860	69.1
Other Utility Plant	$ 1,446,598,806	10.5
Accumulated Provision for Depreciation and Amortization	357,140,271	2.6
Net Other Utility Plant	$ 1,089,458,535	7.9
Total Utility Plant	$ 14,575,599,173	106.3
Accumulated Provision for Depreciation and Amortization	4,013,998,778	29.3
Net Total Utility Plant	$ 10,561,600,395	77.0
Investment and Fund Accounts Less Reserves	$ 1,524,641,014	11.1
Current and Accrued Assets Less Reserves	1,510,623,572	11.0
Deferred Debits	118,028,712	.9
Total Assets and Other Debits	$ 13,714,893,693	100.0
Liabilities and Other Credits:		
Investment of Municipality	$ 405,982,837	3.0
Constructive Surplus or Deficit	(12,753,304)	(.1)
Retained Earnings	5,593,457,973	40.8
Total Investment and Surplus	$ 5,986,687,506	43.7
Long-Term Debt	$ 6,767,530,422	49.3
Current and Accrued Liabilities	747,819,542	5.5
Deferred Credits	113,446,247	.8
Operating Reserves	99,409,976	.7
Total Liabilities and Other Credits	$ 13,714,893,693	100.0

SOURCE: FPC, FPC News, No. 22068, January 19, 1976.

TABLE 67 -*Municipal electric utilities* [1]

COMPOSITE BALANCE SHEET

[Thousands of dollars]

	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963
ASSETS AND OTHER DEBITS											
Electric utility plant	$14,383,832	$13,792,147	$12,692,481	$11,398,754	$10,488,534	$9,773,376	$8,838,759	$8,023,731	$7,491,665	$6,992,376	$6,519,770
Accumulated provisions for depreciation and amortization	3,436,283	3,279,115	3,017,155	2,806,717	2,578,020	2,372,591	2,175,454	1,991,531	1,801,555	1,626,470	1,475,336
Net electric utility plant	10,947,549	10,513,032	9,675,326	8,592,037	7,910,514	7,400,785	6,663,305	6,032,200	5,690,110	5,365,906	5,044,434
Other utility plant	2,073,508	1,895,511	1,764,925	1,540,449	1,471,060	1,451,841	1,408,720	1,267,768	1,173,573	1,086,644	990,211
Accumulated provisions for depreciation and amortization	502,939	478,061	445,454	389,444	364,702	347,367	328,372	291,108	261,617	237,865	217,589
Net other utility plant	1,570,569	1,417,450	1,319,471	1,151,005	1,106,358	1,104,474	1,080,348	976,660	911,956	848,779	772,622
Total utility plant	16,457,340	15,687,658	14,457,406	12,939,203	11,959,594	11,225,217	10,247,479	9,291,499	8,665,238	8,079,020	7,509,981
Accumulated provisions for depreciation and amortization	3,939,222	3,757,176	3,462,609	3,196,161	2,942,722	2,719,958	2,503,826	2,282,639	2,063,172	1,864,335	1,692,925
Net total utility plant	12,518,118	11,930,482	10,994,797	9,743,042	9,016,872	8,505,259	7,743,653	7,008,860	6,602,066	6,214,685	5,817,056
Investment and fund accounts less reserves	1,648,725	1,492,209	1,280,821	1,070,222	958,618	991,090	890,575	782,750	719,606	681,806	641,715
Current and accrued assets less reserves	1,411,343	1,320,755	1,166,553	1,332,605	1,273,024	983,613	966,805	941,845	894,594	807,184	708,811
Deferred debits	159,041	227,413	146,262	136,609	162,764	164,137	110,448	132,044	162,109	170,159	126,287
Reacquired long-term debt											
Total assets and other debits	15,737,227	14,970,859	13,588,433	12,282,478	11,411,278	10,644,099	9,711,481	8,865,499	8,378,375	7,873,834	7,293,869
LIABILITIES AND OTHER CREDITS											
Investment of municipality	634,333	609,273	655,909	453,883	434,094	420,789	389,366	356,505	315,044	270,684	253,897
Surplus	5,882,249	5,605,755	5,185,281	4,850,201	4,539,485	4,276,091	4,019,164	3,715,930	3,460,865	3,226,536	2,934,480
Total investment and surplus	6,516,582	6,215,028	5,841,190	5,304,084	4,973,579	4,696,880	4,408,530	4,072,435	3,775,909	3,497,220	3,188,377
Long-term debt	7,828,203	7,481,868	6,636,388	5,997,883	5,455,858	5,132,667	4,578,430	4,112,683	3,919,311	3,739,715	3,538,287
Current and accrued liabilities	633,429	550,510	468,962	417,366	485,736	355,465	284,358	263,530	265,741	240,836	234,117
Deferred credits	107,095	84,936	70,290	60,145	57,652	64,924	61,835	68,588	91,859	97,580	57,788
Operating reserves	95,646	93,749	86,110	76,254	60,168	65,990	78,464	69,994	50,818	40,706	51,727
Contribution in aid of construction	556,272	544,768	485,493	426,746	378,285	328,173	299,864	278,269	274,737	257,777	223,573
Total liabilities and other credits	15,737,227	14,970,859	13,588,433	12,282,478	11,411,278	10,644,099	9,711,481	8,865,499	8,378,375	7,873,834	7,293,869

[1] Exclusive of the Power Authority of the State of New York.

SOURCE: FPC, Publicly Owned, 1973.

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TABLE 68 —*Municipal electric utilities* [1]

BALANCE SHEET RELATIONSHIPS

Relationship	Year										
	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963
Electric utility plant per dollar electric revenues	4.72	4.98	5.14	5.29	5.38	5.44	5.38	5.22	5.21	5.25	5.30
Percent of capitalization:											
Investment of municipality and surplus	45.4	45.4	46.8	46.9	47.7	47.8	49.1	49.8	49.1	48.3	47.4
Long-term debt	54.6	54.6	53.2	53.1	52.3	52.2	50.9	50.2	50.9	51.7	52.6
Long-term debt:											
Percent of total gross utility plant	47.6	47.7	45.9	46.4	45.6	45.7	44.7	44.3	45.2	46.3	47.1
Percent of total net utility plant	62.5	62.7	60.4	61.6	60.5	60.3	59.1	58.7	59.4	60.2	60.8
Accumulated provision for depreciation percent of total utility plant	23.9	23.9	24.0	24.7	24.6	24.2	24.4	24.6	23.8	23.1	22.5
Accumulated provision for depreciation percent of electric utility plant	23.9	23.8	23.8	24.6	24.6	24.3	24.6	24.8	24.0	23.3	22.6

[1] Exclusive of the Power Authority of the State of New York.

SOURCE: FPC, Publicly Owned, 1973.

TABLE 69 *Municipal electric utilities*[1]

SELECTED BALANCE SHEET ITEMS

[Thousands of dollars]

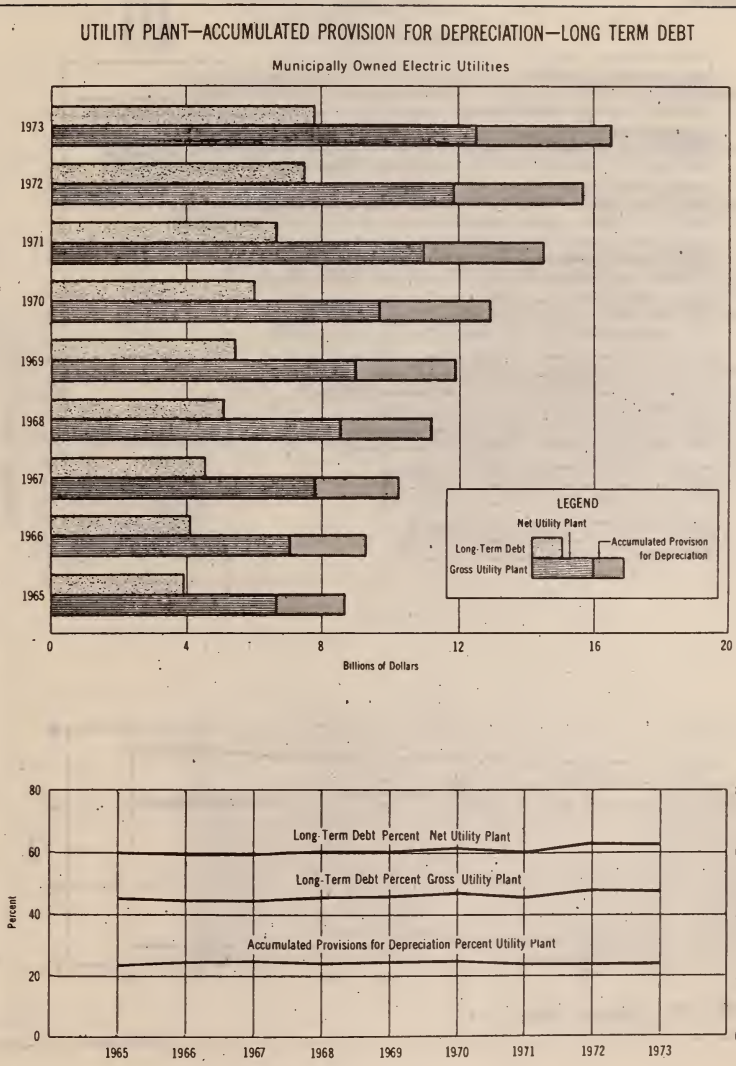
Year	Utility plant	Accumulated provisions for depreciation and amortization	Net utility plant	Current assets	Other assets and debits	Total (assets) (liabilities)	Investment of municipality	Surplus	Long-term debt	Current liabilities	Contributions in aid of construction	Other liabilities and credits
1946	$1,496,960	$375,430	$1,121,530	$214,573	$150,589	$1,486,692	$90,444	$602,033	$606,433	$38,264	$96,319	$53,199
1947	1,593,490	407,066	1,186,433	247,279	159,554	1,593,266	93,690	658,260	632,361	49,493	97,997	61,465
1948	1,751,884	433,645	1,318,239	238,312	152,588	1,709,139	111,301	709,389	672,089	57,770	101,758	56,832
1949	2,001,840	466,987	1,534,853	276,319	155,412	1,966,584	125,811	784,814	824,075	63,796	108,936	59,152
1950	2,199,927	505,081	1,694,846	278,747	149,230	2,122,823	146,340	852,055	873,447	68,870	119,884	62,227
1951	2,401,717	542,252	1,859,465	283,397	173,000	2,315,862	157,179	919,983	973,016	63,122	126,324	76,238
1952	2,619,319	585,410	2,033,909	329,909	195,244	2,559,062	159,372	1,031,450	1,099,851	66,418	129,685	72,286
1953	2,837,911	630,344	2,207,567	309,150	262,275	2,718,992	170,779	1,137,952	1,126,496	70,455	132,851	80,459
1954	3,073,998	681,773	2,392,225	336,937	220,557	2,949,719	176,189	1,218,283	1,222,825	72,411	137,195	92,786
1955	3,334,615	747,080	2,587,535	321,492	233,942	3,142,969	190,470	1,334,619	1,282,694	84,538	141,761	108,887
1956	3,647,829	813,765	2,834,064	499,766	283,969	3,617,799	195,979	1,440,494	1,595,446	100,119	147,691	138,070
1957	3,976,772	874,722	3,102,050	494,619	430,118	4,026,817	218,760	1,563,063	1,851,295	103,977	152,533	137,189
1958	4,418,765	958,881	3,459,884	512,026	404,655	4,376,565	239,166	1,690,115	2,010,412	124,721	163,018	149,113
1959	4,793,618	1,052,412	3,741,206	493,296	650,805	4,885,307	240,689	1,822,194	2,337,818	158,439	170,560	155,607
1960	5,114,921	1,151,794	3,963,127	541,230	613,394	5,117,751	262,338	1,968,322	2,475,607	145,948	179,080	86,456
1961 new series*	5,799,966	1,284,078	4,515,888	562,141	528,460	5,606,489	251,109	2,282,143	2,637,226	155,768	193,170	87,073
1962 new series*	6,973,531	1,534,227	5,439,304	640,586	719,782	6,799,672	259,421	2,663,322	3,358,080	220,707	203,256	94,886
1963	7,509,981	1,692,925	5,817,056	708,811	768,002	7,293,869	253,897	2,934,480	3,538,288	234,117	223,572	109,515
1964	8,079,020	1,864,335	6,211,685	807,181	851,965	7,873,834	270,684	3,266,536	3,739,715	240,836	257,777	138,286
1965	8,665,238	2,063,172	6,602,066	894,594	881,715	8,378,375	315,044	3,460,865	3,919,311	265,741	274,737	142,677
1966	9,291,499	2,282,639	7,008,860	941,845	914,794	8,865,499	356,505	3,715,930	4,112,683	263,530	278,269	138,582
1967	10,247,479	2,503,826	7,743,653	966,805	1,001,023	9,711,481	389,366	4,019,164	4,578,430	284,358	299,863	140,300
1968	11,225,217	2,719,958	8,505,259	983,613	1,155,227	10,644,099	420,789	4,276,091	5,132,667	355,465	328,173	130,914
1969	11,959,594	2,942,722	9,016,872	1,273,024	1,121,382	11,411,278	434,094	4,539,485	5,455,858	485,736	378,285	117,820
1970	12,939,203	3,196,161	9,743,042	1,332,605	1,206,831	12,282,478	453,883	4,850,201	5,997,883	417,366	426,746	136,399
1971	14,457,406	3,462,609	10,994,797	1,186,553	1,427,083	13,588,133	655,909	5,185,281	6,636,388	468,962	455,493	156,400
1972	15,687,658	3,757,177	11,930,481	1,320,755	1,719,623	14,970,859	609,273	5,605,755	7,481,868	650,510	544,768	178,685
1973	16,457,340	3,939,222	12,518,118	1,411,343	1,807,766	15,737,227	631,333	5,882,249	7,828,203	633,429	556,272	202,7 1

[1] Exclusive of the Power Authority of the State of New York.

*New series refers to an increase in the number of companies reporting to the FPC.

SOURCE: FPC, Publicly Owned, 1973.

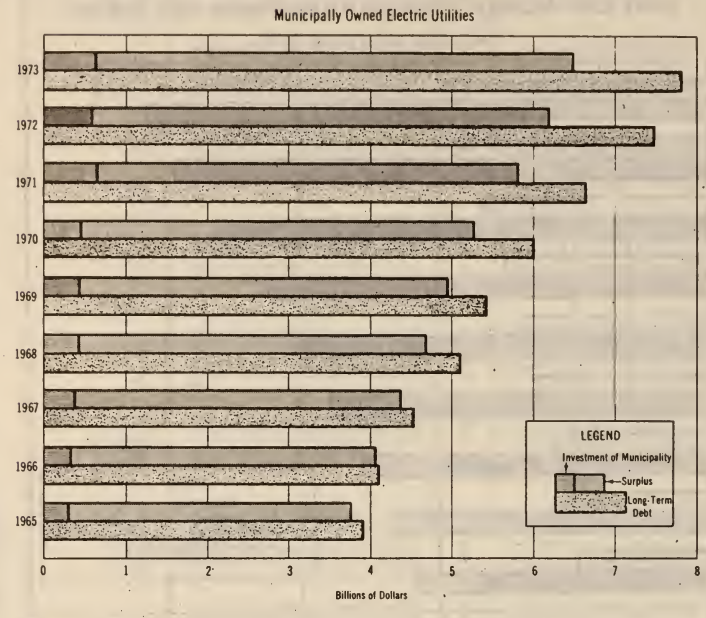
FIGURE 14

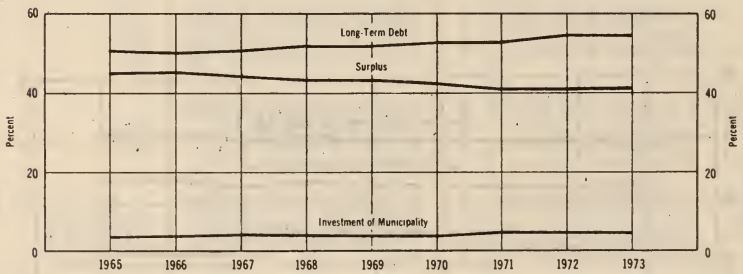


SOURCE: FPC, Publicly Owned, 1973.

FIGURE 15

CAPITALIZATION





SOURCE: FPC, Publicly Owned, 1973.

TABLE 70

COMPOSITE INCOME STATEMENT

486 Municipal Electric Utilities
Year 1974

	Amount	Percent of Operating Revenues	Percent of Operations and Maintenance Expenses	Percent of Production Expenses
Electric Utility Operating Income:				
Operating Revenues	$3,294,289,204	100.0		
Electric Operating Expenses:				
Production Expenses:				
Steam Power	$ 674,243,659	20.5	30.2	40.1
Hydraulic Power	17,267,170	.5	.8	1.0
Internal Combustion Engine Power	49,626,259	1.5	2.2	3.0
Purchased Power	933,201,910	28.3	41.8	55.5
Other Production Expenses	6,251,570	.2	.3	.4
Total Production Expenses	$1,680,590,568	51.0	75.4	100.0
Transmission Expenses	30,621,315	.9	1.4	
Distribution Expenses	229,708,579	7.0	10.3	
Customer Accounts Expenses	85,336,741	2.6	3.8	
Sales Expenses	17,234,505	.5	.8	
Administrative and General Expenses	186,630,265	5.7	8.4	
Total Elec. Oper. and Maint. Expenses	$2,230,121,973	67.7	100.0	
Depreciation and Amortization	318,751,912	9.7		
Taxes and Tax Equivalents	141,397,159	4.3		
Total Operating Expenses	$2,690,271,044	81.7		
Net Operating Revenues	$ 604,018,160	18.3		
Income from plant leased to others	$ 6,948,838	.2		
Electric Utility Operating Income	$ 610,966,998	18.5		
Other Utility Operating Income	12,617,979	.4		
Total Utility Operating Income	$ 623,584,977	18.9		
Other Income	$ 119,750,946	3.6		
Allowance for Funds Used During Construction	64,100,155	2.0		
Gross Income	$ 807,436,078	24.5		
Income Deductions:				
Interest on Long-Term Debt	273,920,512	8.3		
Other Income Deductions	20,673,771	.6		
Total Income Deductions	$ 294,594,283	8.9		
Income Before Extraordinary Items	$ 512,841,795	15.6		
Extraordinary Income	$ 9,127,439	.3		
Extraordinary Deductions	8,495,524	.3		
Net Income	$ 513,473,710	15.6		

SOURCE: FPC, FPC News, No. 22068, January 19, 1976.

TABLE 71—*Municipal electric utilities* [1]

COMPOSITE INCOME ACCOUNT

[Thousands of dollars]

	1973	1672	1971	1970	1969	1968	1967	1966	1965	1964	1963
Electric utility operating income:											
Operating revenues	$3,047,019	$2,786,904	$2,467,264	$2,153,474	$1,949,273	$1,794,938	$1,643,833	$1,536,928	$1,439,181	$1,331,646	$1,230,011
Operation and maintenance expenses	1,950,150	1,736,208	1,532,996	1,297,739	1,128,258	1,016,684	934,833	869,954	801,725	732,755	680,336
Depreciation and amortisation	313,436	300,529	280,402	253,676	238,849	225,376	206,360	192,126	178,808	168,254	156,493
Taxes and tax equivalents	130,042	102,724	93,193	61,850	73,961	65,301	59,991	56,267	50,636	46,817	43,043
Total electric operating expenses	2,393,628	2,139,461	1,906,591	1,632,967	1,441,068	1,310,360	1,200,184	1,118,347	1,031,179	949,826	876,872
Net operating revenues	653,391	627,443	560,673	520,507	508,206	484,578	443,648	418,581	407,973	383,020	351,039
Income from electric plant leased to others	7,063	7,076	7,154	7,267	7,264	7,222	7,816	7,470	7,394	484	483
Electric utility operating income	660,454	634,522	567,827	527,774	515,469	491,800	451,163	426,051	415,366	382,504	351,522
Other utility operating income	31,822	27,352	29,760	31,254	13,566	16,804	18,282	17,752	18,853	18,299	18,114
Total utility operating income	692,276	661,874	597,587	549,028	529,035	508,604	456,418	443,803	432,219	400,803	367,636
Other income	120,250	102,523	88,300	81,122	67,071	66,303	46,838	47,508	40,874	34,716	29,743
Allowance for funds used during construction	59,919	43,730	31,043	21,701	12,906	12,663	13,016	8,256	7,967	18,218	18,056
Total income*	872,445	808,127	718,930	651,851	609,011	577,570	527,269	499,564	481,060	451,734	415,435
Income deductions:											
Interest on long-term debt	308,798	295,424	248,648	202,384	174,793	153,717	143,483	133,366	127,148	120,770	118,503
Other income deductions	33,341	21,451	25,233	18,480	14,559	14,771	12,435	13,299	12,186	8,320	4,579
Total income deductions	342,139	319,875	271,878	218,864	189,352	177,488	154,867	144,665	139,332	127,090	121,082
Income before extraordinary items	530,306	488,252	446,052	432,988	419,659	400,082	372,382	354,899	341,728	324,644	294,383
Extraordinary income	8,050	11,833	3,813	2,973							
Extraordinary deductions	10,607	11,171	8,773	5,768							
Net income	527,749	488,914	438,892	430,193	419,659	400,082	372,382	354,899	341,728	324,644	294,383

[1] Exclusive of the Power Authority of the State of New York.

** Reinstated to conform with 1670 reporting.

TABLE 72—*Municipal electric utilities* [1]

INCOME ACCOUNT RELATIONSHIPS

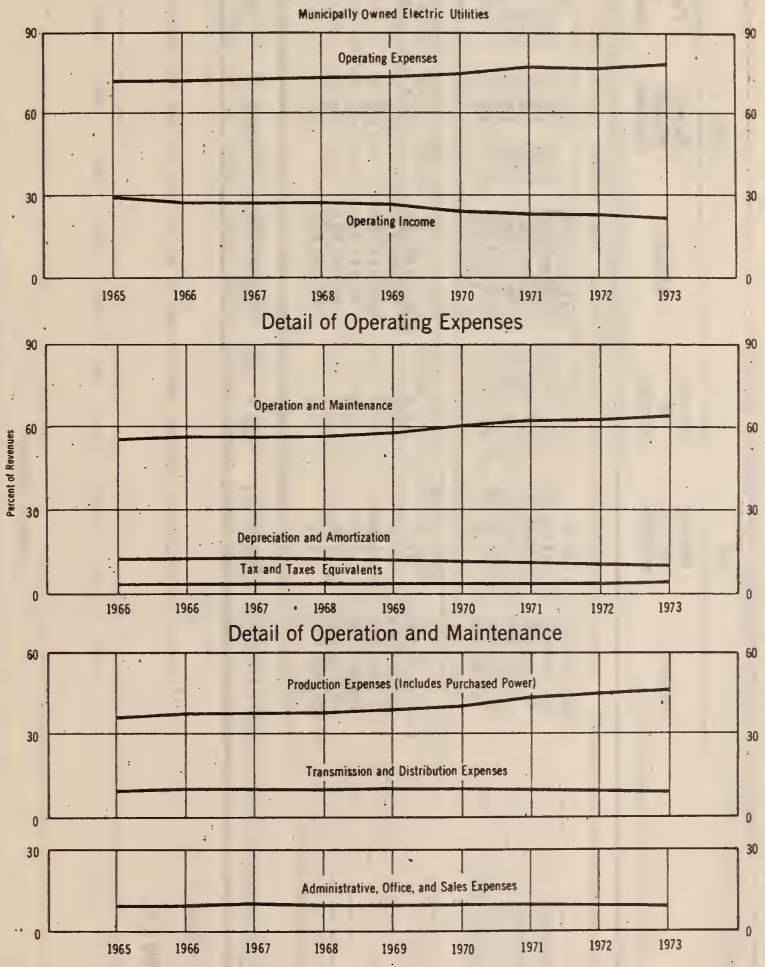
Relationship	Year										
	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963
Percent of electric operating revenues:											
Electric operation and maintenance expenses	64.0	62.7	62.1	60.3	57.8	56.8	56.9	56.6	55.7	55.0	55.3
Electric depreciation and amortisation	10.3	10.9	11.4	11.8	12.3	12.6	12.5	12.5	12.4	12.6	12.7
Electric taxes and tax equivalents	4.3	3.7	3.8	3.6	3.8	3.9	3.8	3.7	3.5	3.7	3.5
Electric operating expenses—total	78.6	77.3	77.3	75.8	74.0	73.0	73.0	72.8	71.8	71.3	71.6
Electric operating income—percent of average net electric investment	6.0	6.1	6.0	6.2	6.4	6.8	6.9	7.1	7.3	7.1	7.0
Electric depreciation and amortisation percent of electric plant	2.2	2.2	2.3	2.3	2.5	2.3	2.3	2.4	2.4	2.4	2.4
Interest on long-term debt—times earned	2.8	2.7	3.0	3.3	3.4	3.5	3.6	3.7	3.7	3.8	3.4

[1] Exclusive of the Power Authority of the State of New York.

SOURCE: FPC, Statistics of Publicly Owned, 1973.

FIGURE 16

ELECTRIC OPERATING EXPENSES—OPERATING INCOME
PERCENT OF OPERATING REVENUES



SOURCES: FPC, Publicly Owned, 1973

TABLE 73—*Municipal electric utilities* [1]

COMPOSITE ELECTRIC OPERATION AND MAINTENANCE EXPENSES

Item	1973			1972		
	Amount	Percent of total expenses	Percent of revenues	Amount	Percent of total expenses	Percent of revenues
Production:						
Steam power	$520,852,230	26.7	17.1	$423,432,079	24.4	15.3
Nuclear	26,786,673	1.4	.9	20,858,914	1.2	.7
Hydraulic power	30,154,658	1.5	1.0	28,266,369	1.6	1.0
Internal combustion engine power	40,022,635	2.1	1.3	30,117,308	1.8	1.1
Purchased	791,179,193	40.6	25.9	724,466,914	41.7	26.2
Other production expenses	8,120,985	.4	.3	5,391,280	.3	.2
Total production expenses	1,417,116,374	72.7	46.5	1,232,532,864	71.0	44.5
Transmission	37,341,383	1.9	1.2	34,801,221	2.0	1.2
Distribution	221,841,716	11.4	7.3	208,286,507	12.0	7.5
Customer accounts expenses	76,971,318	3.9	2.5	73,519,565	4.2	2.7
Sales expenses	20,321,323	1.0	.7	22,231,743	1.3	.8
Administrative and general	176,557,811	9.1	5.8	164,835,934	9.5	6.0
Total electric operation and maintenance expenses	1,950,149,925	100.0	64.0	1,736,207,834	100.0	62.7

[1] Exclusive of the Power Authority of the State of New York.

SOURCE: FPC, Publicly Owned, 1973.

TABLE 74 —*Municipal electric utilities* [1]

COMPOSITE ELECTRIC OPERATION AND MAINTENANCE EXPENSES

[Thousands of dollars]

	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963
Production:											
Steam power:											
Fuel, Other	$520,852	$423,432	$352,759	$298,055	$268,543	$245,698	$222,267	$201,183	$187,108	$187,608	$179,036
Total	520,852	423,432	352,759	298,055	268,543	245,698	222,267	201,183	187,108	187,608	179,036
Nuclear power	26,787	20,859	4,612	1,235	1,335	1,153					
Hydraulic power	30,155	28,267	25,743	23,539	21,883	20,000	16,531	15,667	14,923	15,089	13,094
Internal combustion engine power:											
Fuel, Other	40,023	30,117	25,933	23,150	15,977	15,556	14,905	14,997	12,725	12,140	11,206
Total	40,023	30,117	25,933	23,150	15,977	15,556	14,905	14,997	12,725	12,140	11,206
Purchased power	791,179	724,467	643,109	521,253	437,910	390,214	360,580	344,695	311,448	262,475	240,519
Other production expenses	8,121	5,391	12,329	7,439	3,237	1,491	978	1,020	1,390	397	727
Total production expenses	1,417,117	1,232,533	1,064,485	874,671	748,885	674,112	615,361	577,562	527,594	477,709	444,582
Transmission	37,341	34,801	31,584	28,435	22,409	24,153	20,987	20,836	18,080	15,991	12,071
Distribution	221,842	208,287	197,171	179,176	164,377	144,291	133,279	124,024	116,239	110,825	104,379
Customer accounts expenses	76,971	73,519	68,077	59,211	52,871	47,904	44,587	41,015	39,835	35,766	33,345
Sales expenses	20,321	22,232	21,971	21,728	21,149	19,781	18,201	16,607	16,455	14,979	13,993
Administrative and general	176,558	164,836	149,708	134,519	118,567	109,443	102,418	89,820	83,532	77,485	71,966
Total electric operations and maintenance expenses	1,950,150	1,736,208	1,532,996	1,297,740	1,128,258	1,019,684	934,833	869,954	801,735	732,755	680,336

[1] Exclusive of the Power Authority of the State of New York.

SOURCE: FPC, Statistics of Publicly Owned, 1973.

TABLE 75-*Municipal electric utilities* [1]

ELECTRIC OPERATION AND MAINTENANCE EXPENSE RELATIONSHIPS

Relationship	Year										
	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963
Operation and maintenance expenses percent of operating revenues	64.0	62.7	62.1	60.3	57.9	56.8	56.9	56.6	55.7	55.0	55.3
Production expenses:											
Percent of operating revenues	46.5	44.5	43.1	40.8	38.4	37.6	37.4	37.6	36.7	35.9	36.1
Per kilowatt-hour sold mills	6.46	5.71	5.25	4.61	4.23	4.16	4.31	4.36	4.34	4.29	4.43
Transmission expenses: Percent of operating revenues	1.2	1.3	1.3	1.3	1.1	1.3	1.3	1.4	1.3	1.2	1.0
Distribution expenses:											
Percent of operating revenues	7.3	7.5	8.0	8.3	8.4	8.0	8.1	8.1	8.1	8.3	8.5
Per customer	$27.53	$26.02	$25.41	$24.15	$22.88	$20.43	$19.37	$18.54	$17.93	$17.88	$17.50
Customer account expenses:											
Percent of operating revenues	2.5	2.7	2.8	2.7	2.7	2.7	2.7	2.7	2.8	2.7	2.7
Per customer	$9.55	$9.18	$8.77	$7.98	$7.36	$6.78	$6.48	$6.13	$6.15	$5.77	$5.59
Sales expenses percent of operating revenues	.7	.8	.9	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Administrative and general expenses percent of operating revenues	5.8	6.0	6.1	6.2	6.1	6.1	6.2	5.8	5.8	5.8	5.8

[1] Exclusive of the Power Authority of the State of New York.

SOURCE: FPC, Publicly Owned, 1973.

TABLE 76–*Municipal electric utilities*[1]

ELECTRIC OPERATING EXPENSES

[Thousands of dollars]

Year	Electric operation and maintenance expenses								Provision for depreciation and amortization	Taxes charged to electric operations	Total electric operating expenses
	Production		Transmission	Distribution	Customer accounts expenses	Sales expenses	Administrative and general	Total			
	Fuel	Other									
1946		$73,371	$2,358	$24,685	$7,562	$2,360	$14,023	$124,359	$31,186	$6,021	$161,566
1947		91,124	2,866	28,802	8,597	2,949	16,356	150,694	32,663	6,491	189,848
1948		109,859	3,123	32,937	9,537	3,372	19,328	178,156	34,818	6,455	219,429
1949		119,784	3,442	36,779	10,612	3,803	21,946	196,366	38,942	7,548	242,856
1950		124,233	3,441	40,007	11,370	3,807	23,431	206,289	44,531	8,489	259,309
1951	43,148	98,101	3,829	44,122	12,531	3,912	26,329	231,972	48,942	10,117	291,031
1952	47,679	108,438	4,152	47,915	13,932	4,075	28,690	254,881	53,545	11,933	320,359
1953	49,807	117,207	4,515	52,060	14,777	4,386	30,499	273,251	58,130	13,429	344,810
1954	55,316	126,036	4,831	55,315	15,939	4,583	32,572	294,592	63,427	14,259	372,278
1955	58,985	139,195	5,416	58,084	16,419	4,972	34,569	317,640	71,077	16,212	404,929
1956	71,752	153,012	6,134	61,796	17,229	5,525	37,256	352,704	77,196	18,101	448,001
1957	79,550	169,316	6,527	65,118	18,397	6,090	39,885	384,883	83,817	19,699	488,399
1958	74,583	183,432	7,178	69,513	19,989	6,507	43,377	404,579	90,559	21,854	516,992
1959	89,283	190,246	7,603	72,760	21,441	7,074	47,837	436,244	100,526	24,676	561,446
1960	93,198	204,481	9,342	76,133	23,150	8,538	51,797	466,639	109,183	29,678	605,500
1961 new series*		326,375	10,444	83,608	25,883	10,026	55,865	512,201	121,231	30,797	664,229
1962 new series*		405,485	12,058	95,888	30,341	12,634	66,255	622,661	145,266	39,022	806,949
1963		444,581	12,071	104,379	33,345	13,993	71,967	680,336	156,493	43,043	879,872
1964		477,709	15,991	110,825	35,766	14,979	77,485	732,755	168,254	48,617	949,626
1965		527,594	18,080	116,239	39,835	16,455	83,532	801,735	178,808	50,636	1,031,179
1966		577,562	20,836	124,024	41,015	16,697	89,820	869,954	192,126	56,267	1,118,347
1967		615,361	20,987	133,279	44,587	18,201	102,418	934,833	205,360	59,991	1,200,184
1968		674,112	24,153	144,291	47,904	19,781	109,443	1,019,684	225,375	65,301	1,310,360
1969		718,885	22,409	164,377	52,871	21,149	118,567	1,128,258	238,849	73,961	1,411,068
1970		874,671	28,435	179,176	59,211	21,728	134,519	1,297,740	253,678	81,550	1,632,968
1971	1,064,485		31,584	197,171	68,077	21,971	149,708	1,532,996	280,402	93,193	1,906,591
1972	1,232,533		34,801	208,287	73,519	22,232	164,836	1,736,208	300,529	102,724	2,139,461
1973	1,417,117		37,341	221,842	76,971	20,321	176,558	1,950,150	313,436	130,042	2,393,628

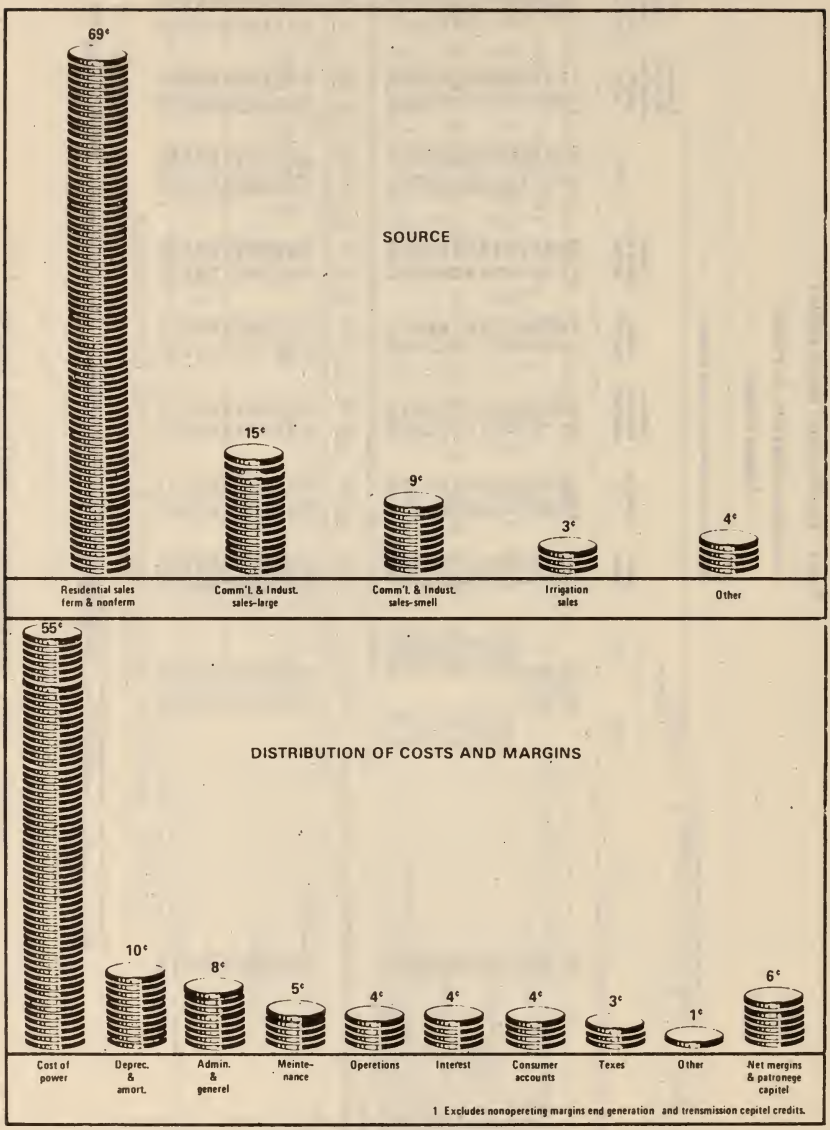
[1] Exclusive of the Power Authority of the State of New York

*New series refers to an increase in the number of companies reporting to the FPC.

SOURCE: FPC, Statistics of Publicly Owned, 1973.

FIGURE 17

SOURCE OF REVENUES, DISTRIBUTION OF COSTS AND MARGINS BY REA BORROWERS OPERATING DISTRIBUTION SYSTEMS[1]
CALENDAR YEAR 1974



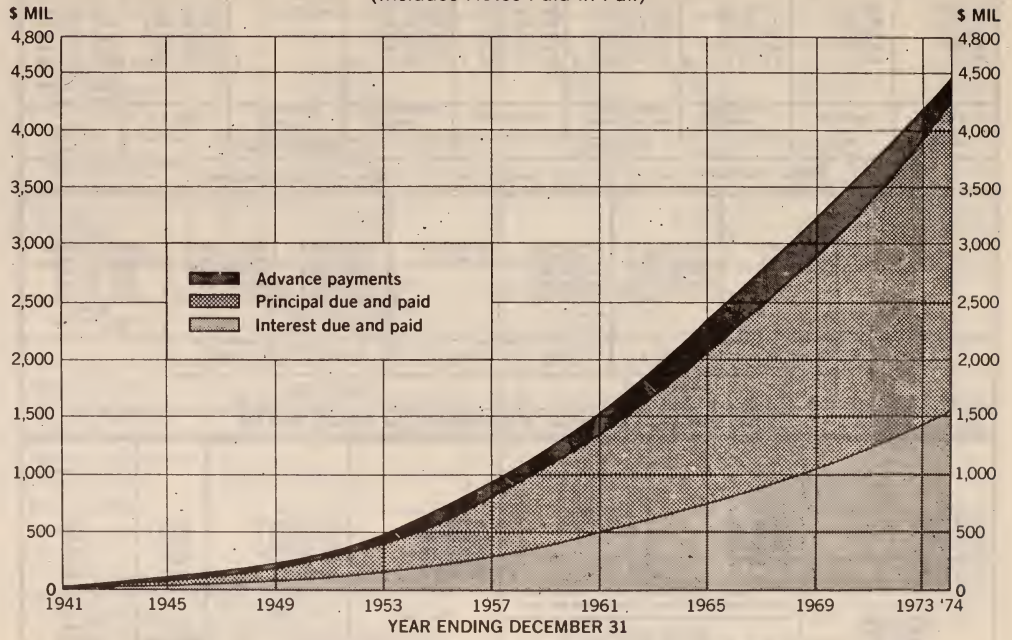
SOURCE: REA, Annual Statistical Report, 1974.

FIGURE 18

PAYMENTS OF PRINCIPAL AND INTEREST ON REA LOANS

Cumulative Totals—Dec. 31, 1941 to Dec. 31, 1974

(Includes Notes Paid in Full)



SOURCE: REA, Annual Statistical Report, 1974.

TABLE 77 -- SUMMARY OF RURAL ELECTRIFICATION FINANCING

LONG-TERM FINANCING APPROVED AND FUNDS ADVANCED ON REA LOANS BY CALENDAR YEAR

Calendar year	Number of borrowers as of Dec. 31	FINANCING APPROVED DURING YEAR				REA LOAN FUNDS ADVANCED DURING YEAR
		Total	REA Loans	NON-REA FINANCING		
				with REA Guarantee	without REA Guarantee[1]	
1970	1,096	$ 345,533,000	$ 345,533,000	$ -	$ -	$ 393,962,332
1971	1,094	374,358,337	340,086,337	-	34,272,000	404,442,447
1972	1,092	635,083,094	521,204,000	-	113,879,094	462,641,195
1973	1,091	775,655,000	588,279,000	-	187,376,000	548,347,358
1974	1,094	2,342,919,400	729,906,000	1,075,433,000	537,580,400	704,715,435

REA LOANS APPROVED AND FUNDS ADVANCED BY INTEREST RATE--CUMULATIVE TOTALS

As of	LOANS APPROVED			FUNDS ADVANCED			
	Total	2 Percent	5 Percent	Total	2 Percent	5 Percent	
May 11, 1935 through Dec. 31, 1970	$ 7,495,728,554	$ 7,495,728,554	$ -	$ 6,655,111,042	$ 6,655,111,042	$ -	
Dec. 31, 1971	7,835,304,056	7,835,304,056	-	7,059,553,489	7,059,553,489	-	
Dec. 31, 1972	8,356,398,057	8,356,398,057	-	7,522,194,684	7,522,194,684	-	
Dec. 31, 1973	8,944,597,057	8,397,869,057	546,728,000	8,070,542,042	7,943,928,533	126,613,509	
Dec. 31, 1974	9,674,337,057	8,486,874,057	1,187,463,000	8,775,257,477	8,237,240,230	538,017,247	

FINANCING APPROVED BY PURPOSE AND LOAN ESTIMATE MILES AND CONSUMERS--CUMULATIVE TOTALS

As of	FINANCING APPROVED			BY PURPOSE			Miles (loan estimate)	Consumers (loan estimate)
	REA Loans	with REA Guarantee	without REA Guarantee[1]	Distribution	Generation and transmission[1]	Consumer facilities		
May 11, 1935 through Dec. 31, 1970	$ 7,495,728,554	$ -	$ 62,000,000	$ 4,891,707,957	$ 2,618,366,161	$ 47,654,436	1,691,506	7,019,124
Dec. 31, 1971	7,835,304,056	-	94,558,400	5,107,597,863	2,774,625,157	47,639,436	1,708,398	7,216,360
Dec. 31, 1972	8,356,398,057	-	202,835,009	5,469,572,036	3,042,131,594	47,529,436	1,737,638	7,604,011
Dec. 31, 1973	8,944,597,057	-	385,182,370	5,932,311,589	3,350,018,401	47,449,437	1,773,280	8,090,751
Dec. 31, 1974	9,674,337,057	1,075,433,000	916,837,620	6,403,883,968	5,215,340,272	47,383,437	1,804,925	8,438,830

TABLE 77 (Continued) -- Summary of Rural Electrification Financing

FINANCING APPROVED BY TYPE AND CLASS OF BORROWER AND PURPOSE AS OF DECEMBER 31, 1974

Type & Class of Borrower	No. of borr.	REA Loans	with REA Guarantee	without REA Guarantee[1]	Distribution	Generation and transmission[1]	Consumer facilities
All Borrowers - Total[2]	1,094	$ 9,674,337,057	$ 1,075,433,000	$ 916,837,620	$ 6,403,883,968	$ 5,215,340,272	$ 47,383,437
Active - Total	984	9,619,879,724	1,075,433,000	916,837,620	6,359,985,651	5,206,280,291	45,884,402
Active Distribution	936	6,769,536,198[3]	0	284,864,082	6,352,825,177	655,690,701	45,884,402
Cooperatives	873[3]	6,476,897,820	0	276,972,832	6,059,424,092	589,138,422	45,308,138
Public Power Districts	44	211,896,140	0	7,628,250	190,859,598	28,088,528	576,264
Other Public Bodies	16	128,354,238	0	263,000	94,383,262	34,233,976	0
Power Companies	3	12,388,000	0	0	8,158,225	4,229,775	0
Active Power Supply	48	2,850,343,526	1,075,433,000	631,973,538	7,160,474	4,550,589,590	0
Cooperatives	42	2,748,217,934	1,075,433,000	631,973,538	7,160,474	4,448,463,998	0
Public Power Districts	2	40,182,520	0	0	0	40,182,520	0
Other Public Bodies	3	56,900,000	0	0	0	56,900,000	0
Power Companies	1	5,043,072	0	0	0	5,043,072	0
Loan Repaid - Total	108	54,420,096	0	0	43,878,631	9,042,430	1,499,035
Distribution	70	47,605,043	0	0	43,878,631	3,593,994	132,418
Power Supply	6	5,448,436	0	0	0	5,448,436	0
Consumer Facilities	32	1,366,617	0	0	0	0	1,366,617

REA FUNDS ADVANCED, PAYMENTS AND BALANCE OUTSTANDING AS OF DECEMBER 31, 1974

Item	DISTRIBUTION, GENERATION AND TRANSMISSION			CONSUMER FACILITIES			TOTAL		
	No. of borr.	Principal	Interest	No. of borr.	Principal	Interest	No. of borr.[4]	Principal	Interest
Advances - Interest									
All Borrowers	1,058	$ 8,727,883,539	$1,653,894,132	675[6]	$ 47,373,937	$ 2,796,154	1,090	$ 8,775,257,476	$1,656,690,286[5]
Paid in full borrowers	76	52,921,061	8,833,183	42	1,499,035	170,946	108	54,420,096	9,004,129[7]
Foreclosed Borrowers	2	37,237	9,730	0	0	0	2	37,237	9,730
Active Borrowers	980	8,674,925,241	1,645,051,219	633	45,874,902	2,625,208	980	8,720,800,143	1,647,676,427
Payments - Active Borrowers									
Payments Applied[8]	980	2,627,613,457	1,576,147,610	633	45,066,333	2,625,208	980	2,672,679,790	1,578,772,818
Advance Payments	736	170,993,194	-	-	-	-	736	170,993,194	-
Balance Outstanding	980	5,876,318,590	68,903,609	7	808,569	0	980	5,877,127,159	68,903,609[5]
Overdue more than 30 days	7	298,929	1,204,209	0	0	0	7	298,929	1,204,209

1. Includes loans obtained by REA borrowers' affiliates specifically organized to facilitate Non-REA financing.
2. Includes loans not shown elsewhere in this table of $37,237 to two borrowers whose loans have been foreclosed.
3. Includes 7 cooperatives with refrigeration loans of $368,770.
4. Borrowers with both construction and consumer facilities loans are counted only once in this column.
5. Includes accumulated and current interest through December 31, 1974, or preceding installment date.
6. Does not include 633 borrowers whose consumer facilities loans have been repaid in full, but who still have active Section 4 (Construction) loans.
7. Includes $2,489 interest paid by these borrowers.
8. Includes amounts on notes declared due.

SOURCE: REA, Annual Statistical Report, 1974.

TABLE 78 -- COMPOSITE BALANCE SHEET REPORTED BY REA BORROWERS AS OF DECEMBER 31, 1974

Item	Distribution borrowers	Power Supply borrowers	All borrowers
Number of borrowers reporting	927	41	968
Assets and other debits			
Utility plant in service	$ 7,437,579,115	$ 2,006,425,398	$ 9,444,004,513
Construction work in progress	254,868,035	410,464,120	665,332,155
Total utility plant	7,692,447,150	2,416,889,518	10,109,336,668
Accum. prov. for deprec. & amort.	2,203,618,363	484,449,420	2,688,067,783
Net utility plant	5,488,828,787	1,932,440,098	7,421,268,885
Investments in assoc. organizations	373,283,835	40,040,073	413,323,908
Other property & investments	168,802,553	149,587,589	318,390,142
Current & accrued assets	723,500,817	293,362,334	1,016,863,151
Deferred debits	32,019,034	27,172,492	59,191,526
Total assets and other debits	$ 6,786,435,026	$ 2,442,602,586	$ 9,229,037,612
Liabilities and other credits			
Memberships	$ 50,476,124	$ 200,499	$ 50,676,623
Patronage capital & other equities	2,186,532,522	170,099,795	2,356,632,317
Total equity	2,237,008,646	170,300,294	2,407,308,940
REA long-term debt	3,951,262,287	1,852,613,059	5,803,875,346
Other long-term debt	228,696,331	197,461,252	426,157,583
Current & accrued liabilities	303,697,967	203,922,390	507,620,357
Deferred credits	42,993,281	15,454,593	58,447,874
Miscellaneous operating reserves	5,277,039	2,334,111	7,611,150
Contributions in aid of construction	17,499,475	516,887	18,016,362
Total liabilities and other credits	$ 6,786,435,026	$ 2,442,602,586	$ 9,229,037,612

SOURCE: REA, Annual Statistical Report, 1974.

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TABLE 79 -- COMPOSITE BALANCE SHEET REPORTED BY REA BORROWERS AS OF DECEMBER 31, 1970 - 1974

Item	1970	1971	1972	1973	1974
Number of borrowers reporting.....	970	970	970	968	968
Assets and other debits					
Utility plant in service.....	$ 6,830,909,866	$ 7,384,723,025	$ 7,965,324,188	$ 8,573,147,981	$ 9,444,004,513
Construction work in progress.....	344,406,078	323,553,213	347,764,283	470,113,570	665,332,155
Total utility plant.....	7,175,315,944	7,708,276,238	8,313,088,471	9,043,261,551	10,109,336,668
Accum. prov. for deprec. & amort.....	2,000,157,291	2,144,691,268	2,299,030,535	2,471,272,913	2,688,067,783
Net utility plant.....	5,175,158,653	5,563,584,970	6,014,057,936	6,571,988,638	7,421,268,885
Investments in assoc. organizations.....	167,344,340	217,687,991	270,870,921	331,837,345	413,323,908
Other property & investments.....	268,518,783	250,842,061	268,500,057	298,132,657	318,390,142
Current & accrued assets.....	549,970,553	594,284,373	678,499,011	793,375,767	1,016,863,151
Deferred debits.....	22,406,753	25,983,075	33,791,906	42,690,569	59,191,526
Total assets and other debits.....	$ 6,183,399,082	$ 6,652,382,470	$ 7,265,719,831	$ 8,038,024,976	$ 9,229,037,612
Liabilities and other credits					
Memberships.....	$ 40,623,188	$ 43,033,202	$ 45,252,787	$ 47,997,157	$ 50,676,623
Patronage capital & other equities.....	1,629,636,942	1,777,535,861	1,957,274,819	2,166,730,022	2,356,632,317
Total equity.....	1,670,260,130	1,820,569,063	2,002,527,606	2,214,727,179	2,407,308,940
REA long-term debt.....	4,247,901,912	4,504,347,362	4,817,673,104	5,238,238,790	5,803,875,346
Other long-term debt.....	7,747,833	19,890,180	57,679,441	134,713,800	426,157,583
Current & accrued liabilities.....	163,682,682	206,347,962	273,571,050	313,652,997	507,620,357
Deferred credits.....	33,678,062	34,263,203	36,519,030	47,151,033	58,447,874
Miscellaneous operating reserves.....	3,608,434	5,296,671	5,088,811	6,282,251	7,611,150
Contributions in aid of construction.....	56,520,029	61,668,029	72,660,789	83,258,926	18,016,362
Total liabilities and other credits.....	$ 6,183,399,082	$ 6,652,382,470	$ 7,265,719,831	$ 8,038,024,976	$ 9,229,037,612

SOURCE: REA, Annual Statistical Report, 1974.

TABLE 80 COMPOSITE INVESTMENT IN ELECTRIC PLANT IN SERVICE REPORTED BY REA BORROWERS AS OF DECEMBER 31, 1974

Electric plant in service	DISTRIBUTION BORROWERS		POWER SUPPLY BORROWERS		ALL BORROWERS	
	Amount	Percent of total	Amount	Percent of total	Amount	Percent of total
Number of borrowers reporting.....	926		41		967	
Total electric plant in service.....	$ 7,426,021,912	100.0	$ 1,991,227,128	100.0	$ 9,417,249,040	100.0
Intangible.....	2,104,764	*	2,177,648	0.1	4,282,412	*
Steam production.....	49,071,985	0.7	829,135,823	41.6	878,207,808	9.3
Hydraulic production.....	14,878,613	0.2	9,453,802	0.5	24,332,415	0.3
Other production.....	60,112,186	0.8	119,354,257	6.0	179,466,443	1.9
Transmission.....	319,261,485	4.3	623,859,545	31.3	943,121,030	10.0
Distribution.....	6,319,044,665	85.1	126,458,809	6.4	6,445,503,474	68.4
General.....	585,719,619	7.9	66,074,520	3.3	651,794,139	6.9
Purchased or sold.....	2,937,893	*	2,537,568	0.1	5,475,461	0.1
Leased to others.....	17,028,690	0.2	73,277,043	3.7	90,305,733	1.0
Held for future use.....	1,858,334	*	4,029,014	0.2	5,887,348	0.1
Acquisition adjustments.....	13,393,015	0.2	(10,530,717)	(0.5)	2,862,298	*
Not classified.....	40,610,663	0.6	145,399,816	7.3	186,010,479	2.0

* Less than 0.05 percent.

SOURCE: REA, Annual Statistical Report, 1974.

TABLE 81 COMPOSITE REVENUES, EXPENSES, AND PATRONAGE CAPITAL REPORTED BY REA BORROWERS CALENDAR YEAR 1974

Item	Distribution borrowers	Power Supply borrowers	All borrowers
Number of borrowers reporting	928	41	969
Operating revenue & patronage capital	$ 2,233,854,782	$ 671,272,044	$ 2,905,126,826
Operating deductions - total	2,014,918,499	634,335,405	2,649,253,904
Power production expense	23,486,231	208,643,529	232,129,760
Cost of purchased power	1,201,573,266	302,669,226	1,504,242,492
Transmission expense	2,691,472	25,813,398	28,504,870
Distribution expense-operations	91,337,790	1,779,635	93,117,425
Distribution expense-maintenance	121,252,607	1,504,727	122,757,334
Consumer accounts expense	87,389,261	429,691	87,818,952
Administrative & general expense	175,542,391	23,777,837	199,320,228
Sales expenses	22,869,067	1,585,789	24,454,856
Depreciation & amortization expense	211,898,821	50,114,641	262,013,462
Tax expense	76,877,593	18,016,932	94,894,525
Utility operating margins	218,936,283	36,936,639	255,872,922
Nonoperating margins	32,301,499	12,415,393	44,716,892
Generation & transmission capital credits	14,165,618	303,877	14,469,495
Other capital cr. & patronage capital	1,969,500	452,051	2,421,551
Interest on long-term debt-net	92,485,166	35,550,700	128,035,866
Other deductions	5,611,462	3,352,539	8,964,001
Net margins & patronage capital	$ 169,276,272	$ 11,204,721	$ 180,480,993

SOURCE: REA, Annual Statistical Report, 1974.

TABLE 82 COMPOSITE REVENUES, EXPENSES AND PATRONAGE CAPITAL REPORTED BY REA BORROWERS
CALENDAR YEARS 1970 - 1974

Item	1970	1971	1972	1973	1974
Number of borrowers reporting.....	971	971	971	969	969
Operating revenue & patronage capital....	$ 1,535,114,360	$ 1,766,494,535	$ 2,025,430,853	$ 2,337,743,662	$ 2,905,126,826
Operating deductions - total.....	1,340,032,538	1,553,323,906	1,780,129,673	2,063,371,618	2,649,253,904
Power production expense.....	87,949,716	109,903,215	139,454,870	158,966,113	232,129,760
Cost of purchased power.....	634,290,031	766,952,867	904,968,322	1,098,439,755	1,504,242,492
Transmission expense.....	14,911,438	16,451,576	18,716,064	20,565,547	28,504,870
Distribution expense-operations.....	64,181,026	68,661,319	75,042,454	81,778,312	93,117,425
Distribution expense-maintenance.....	76,771,093	85,164,557	92,272,328	106,027,935	122,757,334
Consumer accounts expense.....	53,304,415	59,996,588	67,009,529	74,424,071	87,818,952
Administrative & general expenses.....	129,426,709	143,261,043	157,753,834	174,226,076	199,320,228
Sales expenses.....	26,586,179	26,356,490	26,839,590	26,051,595	24,454,856
Deprec. & amort. expense.....	193,030,235	209,488,245	224,069,082	240,241,076	262,013,462
Tax expense.....	59,581,696	67,088,006	74,003,600	82,651,138	94,894,525
Utility operating margins.....	195,081,822	213,170,629	245,301,180	274,372,044	255,872,922
Nonoperating margins.....	23,791,713	23,199,579	26,418,232	32,327,775	44,716,892
Gen. & Trans. capital credits.....	5,398,040	6,988,265	10,273,552	20,725,973	14,469,495
Other capital cr. & patronage capital....	0	0	0	0	2,421,551
Interest on long-term debt-net.....	78,108,189	84,345,890	93,323,876	102,730,305	128,035,866
Other deductions.....	1,972,706	2,040,400	2,912,625	3,854,469	8,964,001
Net margins & patronage capital.....	$ 144,190,680	$ 156,972,183	$ 185,756,463	$ 220,841,018	$ 180,480,993

SOURCE: REA, Annual Statistical Report, 1974.

TABLE 83 COMPOSITE BALANCE SHEET REPORTED BY REA COOPERATIVE BORROWERS
AS OF DECEMBER 31, 1974

Item	Distribution borrowers	Power Supply borrowers	All cooperative borrowers
Number of borrowers reporting	871	41	912
Assets and other debits			
Utility plant in service	$ 7,107,381,009	$ 2,006,425,398	$ 9,113,806,407
Construction work in progress	243,993,715	410,464,120	654,457,835
Total utility plant	7,351,374,724	2,416,889,518	9,768,264,242
Accum. prov. for deprec. & amort.	2,086,700,134	484,449,420	2,571,149,554
Net utility plant	5,264,674,590	1,932,440,098	7,197,114,688
Investments in assoc. organizations	368,901,441	40,040,073	408,941,514
Other property & investments	156,442,332	149,587,589	306,029,921
Current & accrued assets	688,727,034	293,362,334	982,089,368
Deferred debits	30,317,548	27,172,492	57,490,040
Total assets and other debits	$ 6,509,062,945	$ 2,442,602,586	$ 8,951,665,531
Liabilities and other credits			
Memberships	$ 50,476,124	$ 200,499	$ 50,676,623
Patronage capital & other equities	2,061,805,789	170,099,795	2,231,905,584
Total equity	2,112,281,913	170,300,294	2,282,582,207
REA long-term debt	3,826,954,218	1,852,613,059	5,679,567,277
Other long-term debt	218,513,093	197,461,252	415,974,345
Current & accrued liabilities	290,904,534	203,922,390	494,826,924
Deferred credits	42,100,837	15,454,593	57,555,430
Miscellaneous operating reserves	4,579,468	2,334,111	6,913,579
Contributions in aid of construction	13,728,882	516,887	14,245,769
Total liabilities and other credits	$ 6,509,062,945	$ 2,442,602,586	$ 8,951,665,531

SOURCE: REA, Annual Statistical Report, 1974.

TABLE 84 COMPOSITE REVENUES, EXPENSES AND PATRONAGE CAPITAL REPORTED BY REA COOPERATIVE BORROWERS CALENDAR YEAR 1974

Item	Distribution borrowers	Power Supply borrowers	All cooperative borrowers
Number of borrowers reporting	871	41	912
Operating revenue & patronage capital	$ 2,139,899,620	$ 671,272,044	$ 2,811,171,664
Operating deductions - total	1,931,059,042	634,335,405	2,565,394,447
Power production expense	23,127,268	208,643,529	231,770,797
Cost of purchased power	1,148,103,725	302,669,226	1,450,772,951
Transmission expense	2,334,470	25,813,398	28,147,868
Distribution expense - operations	87,738,433	1,779,635	89,518,068
Distribution expense - maintenance	116,493,439	1,504,727	117,998,166
Consumer accounts expense	84,734,245	429,691	85,163,936
Administrative & general expense	169,579,709	23,777,837	193,357,546
Sales expenses	22,137,302	1,585,789	23,723,091
Depreciation & amortization expense	202,501,680	50,114,641	252,616,321
Tax expense	74,308,771	18,016,932	92,325,703
Utility operating margins	208,840,578	36,936,639	245,777,217
Nonoperating margins	30,230,915	12,415,393	42,646,308
Generation & transmission capital credits	14,068,763	303,877	14,372,640
Other capital cr. & patronage capital	1,961,314	452,051	2,413,365
Interest on long-term debt-net	89,530,434	35,550,700	125,081,134
Other deductions	5,280,264	3,352,539	8,632,803
Net margins & patronage capital	$ 160,290,872	$ 11,204,721	$ 171,495,593

SOURCE: REA, Annual Statistical Report, 1974.

GLOSSARY

GLOSSARY

OF

IMPORTANT POWER AND RATE TERMS, ABBREVIATIONS, AND UNITS OF MEASUREMENT

✦

1965

Prepared by an Ad Hoc Committee
on Revision of the Glossary

Established by the

INTER-AGENCY COMMITTEE ON WATER RESOURCES

Department of Agriculture
Department of the Army
Department of Commerce
Department of Health, Education, and Welfare
Department of the Interior
Department of Labor
Federal Power Commission

Promulgated by the Federal Power Commission

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LETTER OF SUBMITTAL

To the Inter-Agency Committee on Water Resources:

At its 49th meeting, held on October 13, 1964, the Inter-Agency Committee on Water Resources authorized the establishment of an ad hoc committee to prepare a revision of the 1949 "Glossary of Important Power and Rate Terms, Abbreviations, and Units of Measurement." This glossary was originally prepared by a subcommittee of the Federal Inter-Agency River Basin Committee.

Pursuant to the above authorization the ad hoc committee, consisting of the undersigned members, has prepared and submits herewith a revised glossary. It recommends that the Inter-Agency Committee on Water Resources approve the publication of this revised glossary, subject to the usual administrative clearance of the document by affected agencies and satisfactory arrangement for financing the publication.

Respectfully submitted.

AD HOC COMMITTEE ON REVISION OF THE GLOSSARY,

JAMES J. STOUT, *Committee Chairman.*
Federal Power Commission.

C. E. GHORMLEY,
Department of Agriculture.

ARNOLD B. TAYLOR,
Department of the Army.

KNOLAND J. PLUCKNETT,
Department of the Interior.

WASHINGTON, D.C.
June 8, 1965.

Publication Approved by the Inter-Agency Committee on Water Resources, June 8, 1965

PREFACE

This is a revision of the 1949 "Glossary of Important Power and Rate Terms, Abbreviations, and Units of Measurement," originally prepared by a subcommittee of the Federal Inter-Agency River Basin Committee. The revision has been undertaken by an ad hoc committee appointed by the Inter-Agency Committee on Water Resources.

The purpose of this revised glossary is to provide uniform terminology for power and rate terms in the reports, records, documents, and correspondence of the member agencies of the Inter-Agency Committee on Water Resources. These agencies include the Departments of Agriculture; the Army; Commerce; Health, Education, and Welfare; the Interior; and Labor; and the Federal Power Commission.

Some of the terms contained herein may also be used in various acts of Congress. Congressional acts sometimes define terms for the purpose of the act, while in other cases the sense in which the term is used is implied from the context of the acts or the decisions of the department or agency involved. No attempt has been made to reconcile the specialized and, in some cases, complicated use of terms in these acts or decisions. No legal application or connotation of any of the terms is to be understood from its inclusion in the glossary nor from the use of the glossary by anyone.

The scope of this revised glossary is generally comparable to that of the 1949 edition. Certain terms, particularly those relating to nuclear power and pumped storage developments, have been added; and a few terms not now in general use have been eliminated. In revising definitions the attempt has been made to adopt precise language. For cases in which more than one term is in frequent use to mean the same thing, the more generally used term is defined and other terms are cross-referenced. As with the 1949 glossary, basic units such as volt, ampere, and watt, and simple dictionary words such as stream and dam are not included.

The definitions are arranged in alphabetical order by major subjects in the glossary. In the index the individual definitions are listed alphabetically.

A list of abbreviations and a number of conversion factors based upon the absolute system of units are included.

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DEFINITIONS

ADJUSTMENT CLAUSES:

Commodity Price Adjustment Clause—a clause in a rate schedule that provides for an adjustment of the customer's bill if the price of commodities or index of commodity prices varies from a specified standard.

Fuel Adjustment Clause—a clause in a rate schedule that provides for an adjustment of the customer's bill if the cost of fuel at the supplier's generating stations varies from a specified unit cost.

Power Factor Adjustment Clause—a clause in a rate schedule that provides for an adjustment in the billing if the customer's power factor varies from a specified percentage, or range of percentages.

Ratchet Demand Clause—a clause in a rate schedule which provides that maximum past or present demands be taken into account to establish billings for previous or subsequent periods.

Tax Adjustment Clause—a clause in a rate schedule that provides for an adjustment in the customer's bill if the supplier experiences a change in tax rate from a specified base or the application of new taxes.

Wage Adjustment Clause—a clause in a rate schedule that provides for an adjustment of the customer's bill if the wage scale of the utility's employees varies from a specified standard.

AMBIENT TEMPERATURE—the temperature of the surrounding cooling medium, such as gas or liquid, which comes into contact with the heated parts of the apparatus.

BILLING, CONJUNCTIVE—the combination of quantities of energy, demands, or other items of two or more meters or services into respective single quantities for the purpose of billing, as if the bill were for a single meter, service, or delivery point.

BURNUP (Nuclear)—a measure of nuclear reactor fuel consumption, usually expressed as megawatt-days per metric ton of fuel exposed.

CAPABILITY—the maximum load which a generator, turbine, transmission circuit, apparatus, station, or system can supply under specified conditions for a given time interval, without exceeding approved limits of temperature and stress.

Overload Capability—the maximum load that a machine, apparatus, or device can carry for a specified period of time under specified conditions when operating beyond its normal rating but within the limits of the manufacturer's guarantee, or in the case of expiration of the guarantee, within safe limits as determined by the owner.

Peaking Capability—the maximum peak load that can be supplied by a generating unit, station, or system in a stated time period. It may be the maximum instantaneous load or the maximum average load over a designated interval of time.

CAPACITY—the load for which a generator, turbine, transformer, transmission circuit, apparatus, station, or system is rated. Capacity is also used synonymously with capability. NOTE: For definitions pertinent to the capacity of a reservoir to store water, *see* Reservoir Storage Capacity.

Assured System Capacity—the dependable capacity of system facilities available for serving system load after allowance for required reserve capacity, including the effect of emergency interchange agreements and firm power agreements with other systems.

Dependable Capacity—the load-carrying ability of a station or system under adverse conditions for the time interval and period specified when related to the characteristics of the load to be supplied. Dependable capacity of a system includes net firm power purchases.

Installed Capacity—the total of the capacities as shown by the nameplates of similar kinds of apparatus such as generating units, turbines,

synchronous condensers, transformers, or other equipment in a station or system.

Peaking Capacity—generating equipment normally operated only during the hours of highest daily, weekly, or seasonal loads. Some generating equipment may be operated at certain times as peaking capacity and at other times to serve loads on a round-the-clock basis.

Reserve Generating Capacity—extra generating capacity available to meet unanticipated demands for power or to generate power in the event of loss of generation resulting from scheduled or unscheduled outages of regularly used generating capacity.

Reserve System Capacity—the difference between dependable capacity of the system, including net firm power purchases, and the actual or anticipated peak load for a specified period.

CENTRAL STATION SERVICE—electric service supplied from an electric system rather than by self-generation.

CHARGE:

Connection Charge—an amount to be paid by a customer in a lump sum, or in installments, for connecting the customer's facilities to the supplier's facilities.

Customer Charge—an amount to be paid periodically by a customer without regard to demand or energy consumption.

Demand Charge—that portion of the charge for electric service based upon a customer's demand.

Energy Charge—that portion of the charge for electric service based upon the electric energy consumed or billed.

Facilities Charge—an amount to be paid by the customer as lump sum, or periodically as reimbursement for facilities furnished. The charge may include operation and maintenance as well as fixed costs.

Termination Charge—any amount not resulting from a rate schedule application which is pay-

able by a customer when service is terminated at the customer's request.

Wheeling Charge—an amount to be paid for wheeling service.

CONSUMER—a customer who purchases power for his own use.

COORDINATED OPERATION:

Coordinated Operation of Electric Systems—operation of generating and transmitting facilities of two or more systems as a single system.

Coordinated Operation of Hydro Plants—operation of a group of hydro plants and storage reservoirs so as to obtain optimum power benefits from the developments with due consideration to all other project purposes and water uses.

COSTS:

Fixed Costs—costs associated with investment in plant.

Fixed Operation Costs—costs other than those associated with investment in plant, which do not vary or fluctuate with changes in operation or utilization of plant.

Incremental Energy Costs—the additional cost of producing and/or transmitting electric energy above some base cost previously determined.

Variable Operating Costs—costs associated with operation or utilization of plant.

CRITICAL HYDRO PERIOD—period when the limitations of hydroelectric power supply due to water conditions are most critical with respect to system load requirements.

CURVE:

Duration Curve—a curve of quantities plotted in descending order of magnitude against time intervals for a specified period. The coordinates may be absolute quantities or percentages.

Intergrated Energy Curve—a curve of demand versus energy showing the amount of energy

represented under a load curve, or a load duration curve, above any point of demand. The coordinates may be absolute quantities or percentages. (Also referred to as a "peak percent curve.")

Load Curve—a curve of demand versus time of occurrence showing in chronological sequence the magnitude of the load for each unit of time of the period covered.

Operating Rule Curve—a curve, or family of curves, indicating how a reservoir is to be operated under specified conditions to obtain best or predetermined results.

CUSTOMER—a purchaser of electric service.

Borderline Customer—a customer of one electric system and billed by that system, but receiving electric service from another system by appropriate arrangement between the two systems.

DEMAND—the rate at which electric energy is delivered to or by a system, part of a system, or piece of equipment, expressed in kilowatts or other suitable unit, at a given instant or averaged over any designated period of time.

Billing Demand—the demand which is used to determine the demand charges in accordance with the provisions of a rate schedule or contract.

Coincident Demand—any demand that occurs simultaneously with any other demand; also the sum of any set of coincident demands.

Contract Demand—the demand that the supplier of electric service agrees to have available for delivery.

Instantaneous Demand—the demand at any instant, usually determined from the readings of indicating or recording instruments.

Integrated Demand—the demand averaged over a specified period, usually determined by an integrating demand meter or by the integration of a load curve.

Maximum Demand—the greatest of a particular type of demand occurring within a specified period.

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Noncoincident Demand—the sum of the individual maximum demands regardless of time of occurrence within a specified period, usually not more than 1 year.

Ratchet Demand—the maximum past or present demands which are taken into account to establish billings for previous or subsequent periods.

DEMAND INTERVAL—the period of time during which the electric energy flow is averaged in determining demand, such as 60-minute, 30-minute, or instantaneous.

DISTRIBUTION SYSTEM—that portion of an electric system used to deliver electric energy from points on the transmission or bulk power system to the consumers.

DIVERSITY, LOAD—the difference between the peak of coincident and noncoincident demands of two or more individual loads.

Seasonal Diversity—load diversity between two (or more) electric systems which occurs when their annual peak loads are in different seasons of the year.

Time Zone Diversity—load diversity between electric systems in different time zones resulting from the time difference as it affects the demands for power.

DRAWDOWN—the distance that the water surface of a reservoir is lowered from a given elevation as the result of the withdrawal of water.

EFFICIENCY, STATION OR SYSTEM—the ratio of the energy delivered from the station or system to the energy received by it under specified conditions.

ELECTRIC RATE—the unit prices and the quantities to which they apply as specified in an electric rate schedule or sales contract.

ELECTRIC SYSTEM—physically connected electric generating, transmission, and distribution facilities operated as a unit under one control.

ENERGY—that which does or is capable of doing work. It is measured in terms of the work it is capable of doing; electric energy is usually measured in kilowatt-hours.

Dump Energy—energy generated in hydroelectric plants by water that cannot be stored or conserved and which energy is in excess of the needs of the electric system producing the energy.

Economy Energy—electric energy produced from a source in one system and substituted for energy that could have been produced by a less economical source in another system.

Firm Energy—electric energy which is intended to have assured availability to the customer to meet all or any agreed upon portion of his load requirements.

Fuel Replacement Energy—electric energy generated at a hydroelectric plant as a substitute for energy which would otherwise have been generated by a thermal-electric plant.

Interchange Energy—electric energy received by one electric utility system usually in exchange for energy delivered to the other system at another time or place. Interchange energy is to be distinguished from a direct purchase or sale, although accumulated energy balances are sometimes settled for in cash.

Net Energy for System—the electric energy requirements of a system, including losses, defined as: (1) net generation of the system, plus (2) energy received from others, less (3) energy delivered to other systems for resale.

Nonfirm Energy—electric energy having limited or no assured availability.

Nuclear Energy—the energy liberated by a nuclear reaction (fission or fusion) or by radioactive decay.

Off-peak Energy—electric energy supplied during periods of relatively low system demands as specified by the supplier.

On-peak Energy—electric energy supplied during periods of relatively high system demands as specified by the supplier.

Potential Hydro Energy—the aggregate energy capable of being developed over a specified period by practicable use of the available streamflow and river gradient.

Primary Energy—hydroelectric energy which is available from continuous power.

Secondary Energy—all hydroelectric energy other than primary energy.

EXTRA HIGH VOLTAGE, OR EHV—a term applied to voltage levels of transmission lines which are higher than the voltage levels commonly used. At present, the electric industry generally considers EHV to be any voltage greater than 230,000 volts.

FACTOR:

Availability Factor—the ratio of the time a machine or equipment is ready for or in service to the total time interval under consideration.

Capacity Factor—the ratio of the average load on a machine or equipment for the period of time considered, to the capacity rating of the machine or equipment.

Demand Factor—the ratio of the maximum demand of a system, or part of a system, to the total connected load of the system, or part of the system, under consideration.

Diversity Factor—the ratio of the sum of the noncoincident maximum demands of the various subdivisions of a system, or part of a system, to the maximum demand of the whole system, or part under consideration.

Load Factor—the ratio of the average load over a designated period to the peak-load occurring in that period.

Loss Factor—the ratio of the average power loss to the peak-load power loss, during a specified period of time.

Operation Factor—the ratio of the total time of actual service, of a machine or equipment, to the total period of time considered.

Output Factor—the ratio of the actual energy output in the period of time considered, to the energy output which would have occurred if the machine or equipment had been operating at its full rating throughout its actual hours of service during the period.

Plant Factor—the ratio of the average load on the plant for the period of time considered to the aggregate rating of all the generating equipment installed in the plant.

Power Factor—the ratio of kilowatts to kilovolt-amperes.

Utilization Factor—the ratio of the maximum demand of a system, or part of a system, to the installed capacity of the system, or part of the system, under consideration.

FISSION—the splitting of a heavy nucleus into two parts (which are nuclei of lighter elements), accompanied by the release of a relatively large amount of energy and frequently one or more neutrons.

FUEL ELEMENTS (Nuclear)—a rod, tube, plate, or other geometrical form into which nuclear fuel is fabricated for use in a reactor.

FUEL REPROCESSING (Nuclear)—the processing of reactor fuel to recover the unused fissionable material.

FUSION—the formation of a heavier nucleus from two lighter ones with the attendant release of energy.

GENERATING UNIT—an electric generator together with its prime mover.

GENERATION—the act or process of producing electric energy from other forms of energy; also the amount of electric energy so produced.

Gross Generation—the total amount of electric energy produced by a generating station or stations, measured at the generator terminals.

Net Generation—gross generation less plant use.

Nonutility Generation—generation by producers having generating plants for the purpose of supplying electric power required by their own industrial, commercial, or military operations.

Utility Generation—generation by electric systems engaged in the business of selling or suppying electric energy for use by the general public.

HEAD:

Critical Head—the head at which the full-gate output of the turbine equals the nameplate generator capacity.

Design Head—the head at which the turbine will operate to give the best overall efficiency under various operating conditions.

Gross Head—the difference of elevations between water surfaces of the forebay and tailrace under specified conditions.

Net Head—the gross head less all hydraulic losses except those chargeable to the turbine.

Rated Head—the head at which a turbine at rated speed will deliver rated capacity at specified gate and efficiency.

HEADWATER BENEFITS—the benefits brought about by the storage and/or release of water by a reservoir project upstream. Application of the term is usually in reference to benefits to a downstream hydroelectric power plant.

HEAT RATE—a measure of generating station thermal efficiency, generally expressed as Btu per net kilowatt-hour. It is computed by dividing the total Btu content of the fuel burned (or of heat released from a nuclear reactor) by the resulting net kilowatt-hours generated.

INTERCONNECTION—a tie permitting a flow of energy between the facilities of two electric systems.

Emergency Interconnection—an interconnection established to meet an emergency need.

INTERTIE—same as INTERCONNECTION.

LOAD—the amount of electric power delivered at a given point.

Base Load—the minimum load in a stated period of time.

Connected Load—the sum of the ratings of the electric power consuming apparatus connected to the system, or part of the system, under consideration.

Interruptible Load—electric power load which may be curtailed at the supplier's discretion, or in accordance with a contractual agreement.

Peak Load—the maximum load in a stated period of time.

LOAD CENTER—a point at which the load of a given area is assumed to be concentrated.

LOSS:

Electric System Loss—total electric energy loss in the electric system. It consists of transmission, transformation, and distribution losses, and unaccounted-for energy losses between sources of supply and points of delivery.

Energy Loss—the difference between energy input and output as a result of transfer of energy between two points.

Line Loss—energy loss and power loss on a transmission or distribution line.

No-Load Loss—power and energy losses in an electric system, or portion thereof, when energized at rated voltage and frequency, but not supplying load.

Percentage Loss—the ratio of loss to input expressed as a percent.

Power Loss—the difference between power input and output as a result of transfer of energy between two points. (Sometimes referred to as "Capacity Loss.")

MULTIPLE-PURPOSE RESERVOIR—a reservoir planned to be used for more than one purpose.

NETWORK—a system of transmission or distribution lines so cross-connected and operated as to permit multiple power supply to any principal point on it.

NUCLEAR REACTOR—an apparatus by means of which a fission chain reaction can be initiated, maintained, and controlled. Its essential component is a core with fissionable fuel. It usually has a moderator, reflectors, shielding, and control mechanisms.

OUTAGE—the period during which a generating unit, transmission line, or other facility, is out of service.

Forced Outage—the shutting down of a generating unit, transmission line, or other facility, for emergency reasons.

Scheduled Outage—the shutdown of a generating unit, transmission line, or other facility, for inspection or maintenance, in accordance with an advance schedule.

OUTPUT—the amount of power or energy delivered from a piece of equipment, station, or system.

PARTICULATE MATTER—solid particles, such as ash, released in exhaust gases at fossil-fuel plants during the combustion process.

PEAK RESPONSIBILITY—the load of a customer, a group of customers, or part of a system at the time of occurrence of the system peak.

PLANT (STATION):

Base Load Plant—a power plant which is normally operated to carry base load and which, consequently, operates essentially at a constant load.

Fossil-Fuel Plant—an electric power plant utilizing fossil fuel, coal, lignite, oil, or natural gas, as its source of energy.

Hydroelectric Plant—an electric power plant utilizing falling water for the motive force of its prime movers.

Nuclear Power Plant—an electric generating station utilizing the energy from a nuclear reactor as the source of power.

Peak Load Plant—a power plant which is normally operated to provide power during maximum load periods.

Power Plant (Generating Station—a generating station at which are located prime movers, electric generators, and auxiliary equipment for producing electric energy.

Pumped Storage Plant—a power plant utilizing an arrangement whereby electric energy is generated for peak load use by utilizing water pumped into a storage reservoir usually during off-peak periods. A pumped storage plant may also be used to provide reserve generating capacity.

Run-of-River Plant—a hydroelectric power plant utilizing pondage or the flow of the stream as it occurs.

Steam-Electric Plant—an electric power plant utilizing steam for the motive force of its prime movers.

Storage Plant—a hydroelectric plant associated with a reservoir having power storage.

PONDAGE—reservoir storage capacity of limited magnitude that provides only daily or weekly regulation of streamflow.

POWER—the time rate of transferring energy. NOTE—The term is frequently used in a broad sense, as a commodity of capacity and energy, having only general association with classic or scientific meaning (*see also* "Electric Power").

Byproduct Power—electric power produced as a byproduct incidental to some other operation.

Continuous Power—hydroelectric power available from a plant on a continuous basis under the most adverse hydraulic conditions contemplated.

Displacement Power—power from one generating source which displaces power from another generating source. Usually this permits power from the latter source to be transmitted to more distant loads.

Electric Power—a term used in the electric power industry to mean inclusively power and energy.

Firm Power—power intended to have assured availability to the customer to meet all or any agreed upon portion of his load requirements.

Interruptible Power—power made available under agreements which permit curtailment or cessation of delivery by the supplier.

Nonfirm Power—power which does not have assured availability to the customer to meet his load requirements.

Prime Power—Same as continuous power.

Reactive Power—the quantity in alternating current circuits that is obtained by taking the square root of the difference between the square of the kilovolt-amperes and the square of the kilowatts. It is expressed as reactive volt-amperes, or vars. Inductive reactance is expressed as positive vars and capacitive reactance is expressed as negative vars.

Seasonal Power—power generated or made available to customers only during certain seasons of the year.

POWER POOL, ELECTRIC—two or more electric systems which are interconnected and operated on a coordinated basis to achieve economies in supplying their combined loads.

PRIME MOVER—the engine, turbine, water wheel, or similar machine which drives an electric generator.

RATE BASE—the net plant investment or valuation base on which the utility is entitled to earn a fair return.

RATE SCHEDULE:

Block Rate Schedule—a rate schedule which provides different unit charges for various blocks of demand or energy.

Class Rate Schedule—a rate schedule which is applicable to one or more specified classes of business or customer use.

Electric Rate Schedule—a statement of the electric rate and the terms and conditions governing its application.

Flat and Meter Rate Schedule—a rate schedule of two components the first of which is a customer or service charge, and the second of which is a price for the energy consumed.

Flat Demand Rate Schedule—a rate schedule that is based on the billing demand and provides no charge for energy.

Flat Rate Schedule—a rate schedule that provides for a specified charge irrespective of the energy used or demand.

Load Factor Rate Schedule—a rate schedule in which the number of kilowatt-hours in any energy block is based on a demand characteristic, such as the equivalent number of hours use of maximum demand. For example: 3 cents per kilowatt-hour for the first 30 kilowatt-hours per kilowatt of the maximum demand; 1½ cents per kilowatt-hour for energy in excess of 30

kilowatt-hours per kilowatt of the maximum demand.

Rate Schedule Applicability—the class of customer or types of use to which the rate schedule applies.

Rate Schedule Availability—the area, zone, or community in which the rate schedule is effective, or the time of day, month, or year during which electric service is offered.

Rate Schedule Group—a group of communities in which the same rate schedule, or group of schedules, is available.

Seasonal Rate Schedule—a schedule containing an electric rate available only during certain specified seasons of the year.

Special Contract Rate Schedule—an agreement for electric service between a utility and another party in addition to, or independent of, any standard rate schedule.

Special Purpose Rate Schedule—a rate schedule limited in its application to some particular purpose or process within one, or more than one, type of industry or business.

Step Rate Schedule—a rate schedule in which a single unit charge is applied to all kilowatt-hours consumed during the billing period, the unit charge per kilowatt-hour depending on the total amount of energy consumed. For example: 5 cents per kilowatt-hour when the monthly consumption is between 1 and 25 kilowatt-hours inclusive; 4 cents per kilowatt-hour for all kilowatt-hours used when the monthly consumption is between 26 and 50 kilowatt-hours inclusive; and 3 cents per kilowatt-hour for all kilowatt-hours used when the monthly consumption is over 50 kilowatt-hours. NOTE.—Not now in common use.

Straight Line Rate Schedule—a rate schedule that provides for a constant charge per unit of energy regardless of the amount consumed. For example: 5 cents per kilowatt-hour.

Three-Part Rate Schedule—a rate schedule that provides three components for determining the total bill: (1) Customer charge; (2) demand charge; (3) energy charge. For example: 50 cents per month per meter; plus, a demand charge of $1.25 per month per kilowatt for the first 25 kilowatts of billing demand in the month; 90 cents per month per kilowatt for the excess of the billing demand over 25 kilowatts; plus an energy charge of 1½ cents per kilowatt-hour. NOTE.—Not now in common use.

Two-Part Rate Schedule—an electric rate schedule of two components: (1) A charge for demand, and (2) a charge for the energy.

Zone Rate Schedule—a rate schedule restricted in its availability to a particular service area.

RATING—limits placed on operating conditions of a machine, transmission line, apparatus, or device based on its design characteristics. Such limits as load, voltage, temperature, and frequency may be given in the rating.

REQUIREMENTS, POWER—the power required by designated loads plus losses from the points of supply.

REREGULATING RESERVOIR—a reservoir used for the purpose of regulating the outflow of water discharged from an upstream reservoir.

RESERVE:

Cold Reserve—thermal generating capacity available for service but not maintained at operating temperature.

Hot Reserve—thermal generating capacity maintained at a temperature and condition which will permit it to be placed into service promptly.

Spinning Reserve—generating capacity connected to the bus and ready to take load. It also includes capacity available in generating units which are operating at less than their capability.

System Required Reserve—the system reserve capacity needed as standby to insure an adequate standard of service.

RESERVOIR STORAGE [1]—the volume of water in a reservoir at a given time.

Active Storage—water occupying active storage capacity of a reservoir.

Dead Storage—water occupying dead storage capacity of a reservoir.

Holdover Storage—water held over from surplus years to supply deficiencies of flow during dry years.

Inactive Storage—water occupying inactive storage capacity of a reservoir.

Live Storage—water occupying live storage capacity of a reservoir.

Power Storage—that portion of the active storage, designated to be used for generating electric energy. Sometimes referred to as the power pool.

Seasonal Storage—water held over from the annual high-water season to the following low-water season.

Surcharge Storage—water occupying surcharge storage capacity of a reservoir.

RESERVOIR STORAGE CAPACITY:

Active Storage Capacity—the portion of the live storage capacity in which water normally will be stored or withdrawn for beneficial uses, in compliance with operating agreements or restrictions.

Dead Storage Capacity—the volume of a reservoir which is below the invert of the lowest outlet and cannot be evacuated by gravity.

Inactive Storage Capacity—the portion of the live storage capacity from which water normally will not be withdrawn, in compliance with operating agreements or restrictions.

Live Storage Capacity—the volume of a reservoir exclusive of dead and surcharge storage capacity.

Storage Capacity—the volume of a reservoir available to store water.

[1] STORAGE is synonomous with CONTENTS and the terms RESERVOIR STORAGE and RESERVOIR CONTENTS are used interchangeably.

Surcharge Storage Capacity—the volume of a reservoir between the crest of an uncontrolled spillway, or the volume between the normal full pond elevation with the crest gates in the normal closed position, and the maximum water surface elevation for which the dam is designed.

RETARDING RESERVOIR—a reservoir formed in a river valley or other basin by a dam or barrier having uncontrolled outlets.

REVERSIBLE TURBINE—a hydraulic turbine, normally installed in a pumped storage plant, which can be used alternately as a pump and prime mover.

SERVICE:

Dual Service—two separate services of different characteristics or for different uses supplying the same customer.

Duplicate Service—two services of substantially the same capacity and characteristics usually supplied from separate sources, but each of sufficient capacity to carry the entire load.

Emergency Service—an additional service, generally of limited capacity, intended only for use under emergency conditions.

Single Service—one set of facilities over which the customer may receive electric power.

Standby Service—service through a permanent connection not normally used but available in lieu of, or as a supplement to, the usual source of supply.

Station Service—auxiliary and other facilities which provide power for station use in a generating, switching, converting, or transforming station.

Temporary Service—electric service to a load which exists for a relatively short time. Examples of temporary services are those supplying construction power, carnivals, and street decorations for celebrations.

Wheeling Service—an electric operation wherein transmission facilities of one system are utilized to transmit power of another system. Wheeling service may be accomplished by displacement.

SERVICE AREA—territory in which a utility system is required or has the right to supply or make available electric service to ultimate consumers.

STANDBY FACILITY—a facility not normally used but available in lieu of, or as a supplement to, a facility normally in service.

STATION—*see* PLANT.

STATION USE—energy used in a generating plant as necessary in the production of electricity. It includes energy consumed for plant light, power, and auxiliaries regardless of whether such energy is produced at the plant or comes from another source.

STEAM SUPPORT—steam-electric power used to conserve power storage for the purpose of increasing dependable capacity of hydroelectric plants.

STREAMFLOW—the rate at which water passes a given point in a stream, usually expressed in cubic feet per second.

- **Average Streamflow**—the average rate of flow at a given point during a specified period.
- **Maximum Streamflow**—the maximum rate of flow at a given point during a specified period.
- **Median Streamflow**—the rate of flow at a given point for which there are equal numbers of greater and lesser flow occurrences during a specified period.
- **Minimum Streamflow**—the minimum rate of flow at a given point during a specified period.
- **Natural Streamflow**—the rate of flow at a given point of an uncontrolled stream, or regulated streamflow adjusted to eliminate the effects of reservoir storage or upstream diversions.
- **Regulated Streamflow**—the controlled rate of flow at a given point during a specified period resulting from reservoir operation.

SUBMETERING—the practice of remetering purchased energy beyond the customer's utility meter, generally for distribution to building tenants through privately owned or rented meters.

SUBSTATION—an assemblage of equipment for the purpose of switching and/or changing or regulating the voltage of electricity.

Step-Down Substation—a substation used to change the voltage of electricity to a lower voltage.

Step-Up Substation—a substation used to change the voltage of electricity to a higher voltage.

SWITCHING STATION—an assemblage of equipment for the sole purpose of tying together two or more electric circuits through switches, selectively arranged to permit a circuit to be disconnected, or to change the electric connections between the circuits.

SYNCHRONIZED OPERATION—an operation wherein power facilities are electrically connected and controlled to operate at the same frequency. It is synonymous with operation in parallel.

TARIFF—a published volume of rate schedules and general terms and conditions.

THERMAL—a term used to identify a type of electric generating station or power plant, or the capacity or capability thereof, in which the source of energy for the prime mover is heat.

TRANSFORMER—an electromagnetic device for changing the voltage of alternating current electricity.

TRANSMISSION—the movement or transfer of electric energy in bulk. Ordinarily the transmission movement is considered to end when the energy is transformed for distribution to ultimate consumers.

Transmission Line Capacity—the maximum continuous rating of a transmission line. The rating may be limited by thermal considerations, capacity of associated equipment, voltage regulation, system stability or other factors.

Transmission System—an interconnected group of electric transmission lines and associated equipment for the movement or transfer of electric energy in bulk between points of supply and points at which it is transformed for delivery to ultimate consumers, or is delivered to electric systems of others.

VALLEY STORAGE—the natural storage capacity in a given reach of a stream both within and without the banks. It varies with the position of the surface of the water.

VALUE:

At-Market Value—the value of power at the market as measured by the cost of producing and delivering equivalent alternative power to the market.

At-Site Value—the value of power at the site of the generating station as measured by the at-market value minus the cost of transmission facilities and losses from generating station to market. The amount of power at the site is more than the amount of power at the market due to transmission losses.

Capacity Value—that part of the at-site or at-market value of electric power which is assigned to capacity or capability.

Energy Value—that part of the at-site or at-market value of electric power which is assigned to energy.

Fuel Replacement Value—the value of electric energy, usually hydro, which may be substituted for energy generated in a fuel-electric plant, in terms of the incremental cost of producing the energy in the fuel-electric plant.

WATER CONDITIONS:

Adverse Water Conditions—water conditions limiting the production of hydroelectric power, either because of low water supply or reduced gross head.

Average Water Conditions—precipitation and runoff conditions which provide water for hydroelectric power development approximating the average amount and distribution available over a long time period, usually the period of record.

Median Water Conditions—precipitation and runoff conditions which provide water for hydroelectric development approximating the median amount and distribution available over a long time period, usually the period of record.

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ABBREVIATIONS

The following abbreviations should be used only when the meaning is unquestionably clear. When in doubt the word should be spelled out.

Term	*Abbreviation*	
	Drawings	*Correspondence*
Absolute	ABS	abs
Acre	spell out	spell out
Acre-foot, also acre-feet	AC FT	acre-ft
Alternating-current (adjective)	AC	a-c
Air circuit breaker	ACB	ACB
Aluminum conductor steel reinforced	ACSR	ACSR
Ampere	AMP	amp
Average	AVG	avg
Boiling point	BP	bp
Brake horsepower	BHP	bhp
British thermal unit	BTU	Btu
Centigrade	C	C
Centimeter	CM	cm
Circular mils	CM	cir mils
Cubic	CU	cu
Cubic centimeter	CC	cc
Cubic feet per second	CFS	cfs
Cubic foot	CU FT	cu ft
Cubic inch	CU IN.	cu in.
Cubic meter	CU M	cu m
Cubic yard	CU YD	cu yd
Day-second-foot (feet)	DSF	dsf
Degree (temperature)	DEG	deg
Diameter	DIA	diam
Direct-current (adjective)	DC	d-c
Efficiency	EFF	eff
Electric	ELEC	elec
Engineer	ENGR	engr
Equation	EQ	eq
Equivalent	EQUIV	equiv
Extra high voltage	EHV	EHV
Fahrenheit	F	F
Feet per minute	FPM	fpm
Feet per second	FPS	fps
Foot	FT	ft
Foot-pound	FT LB	ft-lb

Term	Abbreviation	
	Drawings	*Correspondence*
Gallon	GAL	gal
Gallons per minute	GPM	gpm
Gallons per second	GPS	gps
Gigawatt	GW	gw
Gigawatt-hour	GWH	gwh
Gram	G	g
Ground	GND	gnd
Horsepower	HP	hp
Horsepower-hour	HP-HR	hp-hr
Hour	HR	hr
Inch	IN.	in.
Internal combustion	IC	IC
Joule	J	j
Kilogram	KG	kg
Kilometer	KM	km
Kilovar	KVAR	kvar
Kilovar-hour	KVARH	kvarh
Kilovolt	KV	kv
Kilovolt-ampere	KVA	kva
Kilovolt-ampere-hour	KVAH	kvah
Kilowatt	KW	kw
Kilowatt-hour	KWH	kwh
Latitude	LAT	lat
Liter	L	l
Longitude	LONG.	long.
Lumen	L	spell out
Magnetohydrodynamic	MHD	MHD
Maximum	MAX	max
Mean effective pressure	MEP	mep
Megacycle per second	MC/S	mc/s
Megavar	MVAR	mvar
Megavar-hour	MVARH	mvarh
Megavolt-ampere	MVA	mva
Megawatt	MW	mw
Megawatt-hour	MWH	mwh
Megohm	MEG	spell out
Meter	M	m
Miles per hour	MPH	mph
Mill	spell out	spell out
Millimeter	MM	mm
Million gallons per day	MGD	mgd
Minimum	MIN	min
Month-second-foot (feet)	MSF	msf

Term	Abbreviation	
	Drawings	*Correspondence*
National Electrical Code	NEC	NEC
National Electrical Safety Code	NESC	NESC
Oil circuit breaker	OCB	OCB
Oil circuit recloser	OCR	OCR
Ounce	OZ	oz
Parts per million	PPM	ppm
Pound	LB	lb
Pounds per square foot	PSF	psf
Pounds per square inch	PSI	psi
Power factor	PF	pf
Reactive kilovolt-ampere	KVAR	kvar
Reactive volt-ampere	VAR	var
Revolutions per minute	RPM	rpm
Revolutions per second	RPS	rps
Second	SEC	sec
Specific gravity	SP GR	sp gr
Specific heat	SP HT	sp ht
Square centimeter	SQ CM	sq cm
Square foot	SQ FT	sq ft
Square inch	SQ IN.	sq in.
Square kilometer	SQ KM	sq km
Square meter	SQ M	sq m
Square mile	SQ MI	sq mi
Square millimeter	SQ MM	sq mm
Standard	STD	std
Temperature	TEMP	temp
Ton	spell out	spell out
Ton-mile	spell out	spell out
Ultra-high frequency	UHF	uhf
Very-high frequency	VHF	vhf
Volt	V	v
Volt-ampere	VA	va
Watt	W	w
Watt-hour	WH	wh
Weight	WT	wt
Yard	YD	yd
Year	YR	yr

UNITS OF ENERGY AND OF POWER, AND RELATED CONVERSION FACTORS

The conversion factors listed were furnished by the National Bureau of Standards, U.S. Department of Commerce. They are calculated on the following assumptions:

(1) The joule and watt for which values are given are the absolute electrical units in use on January 1, 1965. For comparison with the international electrical units used prior to this date the conversion factor is:

1 International joule or watt=1.000 165 absolute joule or watt.

(2) The standard value for the acceleration of gravity is taken as 980.665 centimeters per second per second (32.17 feet per second per second). For consistency this value is used for both metric and English units. It makes the horsepower equal to 745.7 absolute watts. The "electrical horsepower" is defined as 746 watts.

(3) The gram-calorie and British thermal unit for which values are given are the International Steam tables calorie and International Steam tables British thermal unit as defined and used in the International Steam tables. To obtain the thermochemical calorie the conversion factor is:

1 International Steam tables calorie=1.000 669 thermochemical calories.

ENERGY

Basic unit=1 joule

1 joule (absolute)=10 000 000 ergs
=0.6242×10^{19} electron-volts
=1 watt-second
=0.001 kilowatt-second
=0.000 000 277 78 kilowatt-hour
=0.000 277 78 watt-hour
=0.001 341 02 horsepower-second
=0.000 000 372 505 horsepower-hour
=0.000 947 8 Btu
=0.000 238 85 kilogram-calorie
=0.737 56 foot-pound

1 foot-pound = 13 558 200 ergs
= 1.355 8 joules
= 0.001 355 8 kilowatt-second
= 0.000 000 376 6 kilowatt-hour
= 0.000 376 6 watt-hour
= 0.001 818 18 horsepower-second
= 0.000 000 505 05 horsepower-hour
= 0.001 285 1 Btu
= 0.000 323 8 kilogram-calorie

1 kilogram-calorie = 1 000 gram-calories
= 4 186.7 joules
= 3.968 3 Btu
= 3 088 foot-pounds
= 1.163 0 watt-hours
= 0.001 163 0 kilowatt-hour
= 0.001 559 6 horsepower-hour

1 British thermal unit (Btu) = 10 550 000 000 ergs
= 1 055.04 joules
= 0.000 293 07 kilowatt-hour
= 0.293 07 watt-hour
= 0.000 393 01 horsepower-hour
= 778.156 foot-pounds
= 0.252 0 kilogram-calorie

1 watt-hour = 36 000 000 000 ergs
= 3 600 joules
= 3.6 kilowatt-seconds
= 0.001 kilowatt-hour
= 4.827 6 horsepower-seconds
= 0.001 341 0 horsepower-hour
= 3.412 Btu
= 0.859 85 kilogram-calorie

1 watt-second = 1 joule

1 kilowatt-second = 1 000 joules

1 kilowatt-hour = 36 000 000 000 000 ergs
= 3 600 000 joules
= 3 600 kilowatt-seconds
= 1 000 watt-hours
= 4 827.6 horsepower-seconds
= 1.341 0 horsepower-hours
= 3 412 Btu
= 859.85 kilogram-calories
= 2 655 000 foot-pounds

1 megawatt-hour = 1 000 kilowatt-hours
= 1 000 000 watt-hours
1 gigawatt-hour = 1 000 000 kilowatt-hours
= 1 000 000 000 watt-hours
1 horsepower-second = 745.7 joules
= 0.000 207 14 kilowatt-hour
= 0.207 14 watt-hour
= 550 foot-pounds
1 horsepower-hour = 2 684 500 joules
= 0.745 7 kilowatt-hour
= 2 544.5 Btu
= 641.197 kilogram-calories

QUADERGY

1 kilovar-hour = 1 reactive kilovolt-ampere-hour
1 megavar-hour = 1 000 kilovar-hours

APPARENT ENERGY

1 megavolt-ampere-hour = 1 000 kilovolt-ampere-hours

POWER

Basic unit = 1 watt = 1 joule per second
1 foot-pound per second = 1.355 8 watts
= 0.001 355 8 kilowatt
= 0.001 818 18 horsepower
= 60 foot-pounds per minute
1 Btu per minute = 17.584 watts
= 0.017 584 kilowatt
= 0.023 580 5 horsepower
1 watt = 10 000 000 ergs per second
= 1 joule per second
= 0.001 kilowatt
= 0.001 341 0 horsepower
watts = volts × amperes × cos angle of lag or lead
volt-amperes = volts × amperes
= watts ÷ cos angle of lag or lead
1 horsepower = 7 457 000 000 ergs per second
= 745.7 watts
= 0.745 7 kilowatt
= 42.408 Btu per minute
= 550 foot-pounds per second
= 33 000 foot-pounds per minute
= 1.013 87 metric horsepower

1 kilowatt=10 000 000 000 ergs per second
=1 000 watts
=1.341 0 horsepower
=56.87 Btu per minute
=737.56 foot-pounds per second
1 watt-hour per second=3 600 watts
=3.6 kilowatts
1 kilowatt-hour per minute=60 kilowatts
1 kilowatt-hour per second=3 600 kilowatts
1 horsepower-hour per minute=60 horsepower
1 megawatt=1 000 000 watts
=1 000 kilowatts
1 gigawatt=1 000 000 000 watts
=1 000 000 kilowatts
=1 000 megawatts

REACTIVE POWER

1 kilovar=1 reactive kilovolt-ampere
1 megavar=1 000 kilovars

APPARENT POWER

1 megavolt-ampere=1 000 kilovolt-amperes

MISCELLANEOUS

1 ampere=unit of current
1 volt=unit of voltage
1 coulomb=unit of quantity of electricity
1 lumen=unit of luminous flux
1 foot-candle=unit of illumination=10.76 lux
=1 lumen per square foot
1 lux=unit of illumination=0.092 90 foot-candle
=1 lumen per square meter
1 billion=1 000 000 000
1 acre-foot=unit of volume in a reservoir
=43 560 cubic feet
=1 233 cubic meters
=325 851 U.S. gallons
=0.504 2 second-foot day
1 second-foot (1 cfs)=unit of flow
=1 cubic foot per second
=0.028 32 cubic meters per second
=7.480 5 gallons per second
=723.97 acre-feet per year

1 million gallons per day (1 mgd) = 1.54723 cubic feet per second
= 694.44 gallons per minute
= 3.0689 acre-feet per day

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A SELECTED BIBLIOGRAPHY ON THE ECONOMICS OF UTILITY RATE MAKING AND RATE REFORM

The first part of this bibliography is a partial listing of articles which have appeared within the last two or three years in the more popular journals. This section also includes Congressional hearings, prints and reports and other government publications. The content of this part of the bibliography covers various aspects of electric utility rate reform, including peak load pricing, inverted block rates, automatic adjustment clauses and lifeline rate and energy stamp proposals. This section also includes several items dealing with the general practice of utility rate making.

Baumol, William J. Walton, Alfred G. Full costing, competition and regulatory practice. Yale law journal, v. 82, Mar. 1973: 639-655.
Article considers two alternative cost standards for the setting of public utility rates. Examines pronouncements and practices of 3 Federal regulatory agencies (the CAB, FPC, and ICC) and argues that they have recently turned away from the fully distributed cost standard in favor of the incremental cost standard.

Berlin, Edward. Cicchetti, Charles J. Gillen, William J. Perspective on power: a study of the regulation and pricing of electric power: a report to the Energy Project of the Ford Foundation. Cambridge, Mass., Ballinger Pub. Co. 1974 174 p.

Bierman, Harold, Jr. Hass, Jerome E. Inflation, equity, efficiency, and the regulatory pricing of electricity. Public policy, v. 23, summer 1975: 299-315.
"The objectives of this paper are to evaluate critically existing rate structures in light of the current cost economics of the electric utility industry, and to examine alternative structures that are more economically efficient."

Blair, John P. The politics of government pricing: political influences on rate structures of publicly-owned electric utilities. American journal of economics and sociology, v. 35, Jan. 1976: 31-36.

"The price differential between residential and commercial users is examined. Variables reflecting the relative political influence of the customer groups are discussed and their strength as determinants of the rate structure is tested. The findings are consistent with theoretical expectations; the higher the gain from favoring one group relative to the other, the greater the variance in price between groups."

Caywood, Russell E. Electric utility rate making--1974. Public utilities fortnightly, v. 94, Dec. 5, 1974: 34-38.
"Proposals for restructuring electric utility rates should be weighed carefully and not rashly."

Cicchetti, Charles J. Smith, V. Kerry. Alternative price measures and the residential demand for electricity: a specification and analysis. Regional science and urban economics, v. 5, Dec. 1975: 503-516.
Considers which price measure provided the best estimates of demand relationships in a cross section of states in 1971.

Cicchetti, Charles J. Electricity price regulation: critical crossroads or new group participation sport. Public utilities fortnightly, v. 94, Aug. 29, 1974: 13-18.
"Attempts to put energy, environmental, and consumer problems into the context of the various pricing conflicts that have become so ubiquitous. A solution to many of the present industry problems is suggested."

Cicchetti, Charles J. The design of electricity tariffs. Public utilities fortnightly, v. 96, Aug. 28, 1975: 25-33.
Recommends time-of-day pricing in electric utility rate restructuring. Enumerates ten basic reasons why such pricing would produce beneficial effects.

Cohn, Herbert B., "Current proposals in rate design," Public utilities fortnightly, December 18, 1975, pp. 21-26.
This article discusses "a number of proposals for major revisions in traditional rate design based on a number of different assumptions and objectives."

Cohn, Herbert B., "Should utility rate structures be revised to discourage electric use?", Public utilities fortnightly, April 11, 1974, pp. 21-25.
It is the position of this article that "the arguments of those who advocate radical revisions of rate structures to discourage the use of electric power are based on highly questionable premises, and are wrong in their conclusions."

Consumer Federation of America. State and Local Organizing Project. A case study of how to prepare a lifeline proposal; conceived by the Vermont 'PIRG'. Washington 1975 28 p.
Discusses preparing a proposal for "lifeline service," under which a relatively low, flat rate is set for the first several hundred kilowatt hours of electric consumption by residential users.

DeAlessi, Louis. Some effects of ownership on the wholesale prices of electric power. Economic inquiry, v. 13, Dec. 1975: 526-538.
"Differences in the property rights which distinguish government-owned and privately-owned, government-regulated business firms imply that government-owned electric utilities sell wholesale electric power at lower prices and buy it at higher prices than similarly-situated private firms." Results from tests of 1965-69 data tend to support these hypotheses.

Deverel, Warren L. Gellert, Jay. An examination of price elasticity--utility rate structure and conservation. Public utilities fortnightly, v. 94, July 18, 1974: 24-27.
"The authors have considered the advisability of revising utility rate structures and find such adjustments can cause more problems than they solve."

Downs, Clark Evans. The use of the future test year in utility rate-making. Boston University law review, v. 52, fall 1972: 791-809.
"This note will examine the effects of this inflation on public utility rate-making in relation to the methods traditionally employed by regulators in the rate-making process. Following this initial examination, this note will focus on the extent to which, legally and theoretically, the traditional methodology has been or can be modified to abate the havoc inflation plays upon public utility rates made today for tomorrow, with particular emphasis on the use of the 'future test' year."

Epstein, Barbara. A proposal to modernize electricity tariffs. Public utilities fortnightly, v. 92, Aug. 30, 1973: 24-29.
A proposal for the revision of electric rate structures to reflect more closely current demand and the costs of fulfilling that demand is set forth.

Howe, Jack W. Lifeline rates--benefits for whom? Public utilities fortnightly, v. 97, Jan. 29, 1976: 22-25.
"An examination of data and records of monthly electric power consumption in two Florida metropolitan areas to determine the effects of price increases on usage patterns of different customer classes."

Huntington, Samuel. The rapid emergence of marginal cost pricing in the regulation of electric utility rate structures. Boston University law review, v. 55, Nov. 1975: 689-774.
Article surveys the regulatory process and approaches to rate design, marginal cost electric rates, and the status of rate structure reform; and concludes that "the adoption of marginal cost pricing principles in the regulation of electric utility rates is an important step in assuring that our limited energy resources will be used efficiently."

Jerabek, Sandra, "A citizens guide to the fuel adjustment clause," Environmental action foundation, Washington. August 1975. 52 p.
"Study is designed to help citizens search out areas of abuse which result from the operation of the automatic fuel adjustment, and to suggest solutions to make the regulation of fuel cost more effective."

Jerabek, Sandra. Reforming the rates. Environmental action, v. 6, Feb. 15, 1975: 3-5.
"Long a source of cheap, abundant energy, and integral to the rapid growth of the nation, the electric utilities now find they are at a crucial turning point....With the greatest potential for immediate reform, utility rate design now is being scrutinized on both the state and federal levels."

Jones, Douglas N. Dovell, Susan. Electric and gas utility rate and fuel adjustment clause increases, 1974. Prepared for the Subcommittee on Intergovernmental Relations and the Subcommittee on Reports, Accounting, and Management of the Committee on Government Operations, United States Senate, in cooperation with state utility commissions. Washington, U.S. Govt. Print. Off., 1975. 45 p. At head of title: 94th Cong., 1st sess. Committee print.

Jones, William K. A new look at rates: price of power should include social costs. Public power, v. 30, Nov.-Dec. 1972: 19-21, 40.
"'Substantial increases in electric system expenditures for research and development represent a constructive approach to the problem.'"

Jones, William K. Judicial determination of public utility rates: a critique. Boston University law review, v. 54, Nov. 1974: 873-902.
Article argues that a Massachusetts plan to have an administrative court resolve public utility rate controversies would be unsound.

Joskow, Paul L. Inflation and environmental concern: structural change in the process of public utility price regulation. Journal of law and economics, v. 17, Oct. 1974: 291-327.

Lapinsky, Martin. Two-part tariffs for public utilities: a brief review of the major conceptual economic literature. Public utilities fortnightly, v. 94, Dec. 5, 1974: 22-27.
"The two-part tariff, used extensively by electric and gas utilities, seems to be the subject of increasing consideration and discussion."

Larson, Charles A. Innovative customer-energy-demand (CED) rate for residential electric service during an energy shortage. Public utilities fortnightly, v. 93, June 20, 1974: 23-25.
"Increased electric energy costs and consumer concern for energy conservation lend strong support for a new and unique cost-based electric rate for residential service."

Latimer, H.A. The cost and efficiency revenue adjustment clause. Public utilities fortnightly, v. 94, Aug. 15, 1974: 19-24.
"As regulators search for a 'better way' to cope with the adverse impact of continuing high levels of inflation on public utility services to consumers, and the nation's leaders urge all-out efforts for greater industry productivity, a cost and efficiency type of revenue adjustment clause may well be a concept whose time has come."

Mann, Patrick C. User power and electricity rates. Journal of law and economics, v. 17, Oct. 1974: 433-443.
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Moore, Charles Guy. Has electricity regulation resulted in higher prices? An econometric evaluation utilizing a calibrated regulatory input variable. Economic inquiry, v. 13, June 1975: 207-220.
Concludes that "electricity regulation raised prices during the period 1947-1966. A politically-motivated, naive policy designed to cross-subsidize residential users may have contributed to this failure."

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"The sudden rise in electric bills has aroused a storm of protest around the automatic adjustment clause. The Subcommittee, therefore, has revised and updated its earlier paper on the subject for the information of NARUC members. An automatic adjustment clause (AAC) is a provision in a utility company tariff by which a change in a selected cost item will automatically change rates charged consumers. The most common forms of adjustment clauses are based on fuel costs in the case of electric utilities and purchased gas

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Pace, Joe D. The poor, the elderly, and the rising cost of energy. Public utilities fortnightly, v. 95, June 5, 1975: 26-30.
"This article explores the possibilities of the use of lifeline rates and fuel stamps as measures put forth to help the poor and elderly cope with rapidly rising energy prices with which they have been burdened."

Renshaw, Edward F. The pricing of electricity. Public utilities fortnightly, v. 97, Jan. 1, 1976: 28-32.
An "approach to the pricing of electricity is suggested for the benefit of everyone--a modified system of marginal cost pricing."

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Schiffel, Dennis. Electric utility regulation: an overview of fuel adjustment clauses. Public utilities fortnightly, v. 95, June 19, 1975: 23-31.
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"Quantitative estimates of the internal cost savings to be derived from changes in the pricing of electric power are devised and evaluated."

Stelzer, Irwin M. A new look at rates: inverted structure challenge pricing. Public power, v. 30, Nov.-Dec. 1972: 16-18, 40.
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Stelzer, Irwin M. Marketing, environment, and rates. Public utilities fortnightly, v. 91, Feb. 1, 1973: 26-30.
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Teed, Ralph H., Jr. A practitioner looks at peak-load pricing. Public utilities fortnightly, v. 97, Jan. 29, 1976: 26-29.
"A study to determine the cost-benefit ratio of time-of-day pricing for electric service--favorable only if customer consumption patterns can be altered."

The Fuel-adjustment caper. Consumer reports, v. 39, Nov. 1974: 836-839.
"The hearth-warming story of how utility monopolies, already free of the rigors of competition, are learning to avoid many other risks by passing them on to you."

U.S. Congress. House. Committee on Interstate and Foreign Commerce. Subcommittee on Oversight and Investigations.
Electric utility automatic fuel adjustment clauses; report 94th Cong., 1st sess. Washington, U.S. Govt. Print. Off., 1975. 195 p.
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"The report reviews the history, operation, and impact of fuel

adjustment clauses. The report concludes that fuel adjustment clauses are unwise, unnecessary, unworkable, and unfair."

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The second part of this bibliography, which follows, is a selection of unannotated articles and books with a more theoretical approach to utility pricing problems, especially as concerns marginal cost pricing and two-part tariffs or peak load pricing.

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